

chain nodes :
 10 12 13 23
 ring nodes :
 1 2 3 4 5 6 7 8 9 15 16 17 18 19 20
 chain bonds :
 8-10 10-12 10-13 10-16 19-23
 ring bonds :
 1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 15-16 15-20 16-17 17-18 18-19
 19-20
 exact/norm bonds :
 5-7 6-9 7-8 8-9 10-12 10-13 10-16 15-16 15-20 16-17 17-18 18-19 19-20 19-23
 exact bonds :
 8-10
 normalized bonds :
 1-2 1-6 2-3 3-4 4-5 5-6
 isolated ring systems :
 containing 1 : 15 :

G1:H,CH3

Match level :
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
 12:CLASS 13:CLASS 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 23:Atom

Generic attributes :

23:
 Saturation : Unsaturated
 Number of Carbon Atoms : less than 7
 Type of Ring System : Monocyclic

Element Count :
 Node 23: Limited

O, O0-1

S, S0-1

N, N0-2

10/699465

=> s 11
SAMPLE SEARCH INITIATED 17:50:47 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 222 TO ITERATE

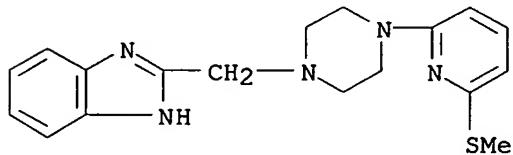
100.0% PROCESSED 222 ITERATIONS 9 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 3547 TO 5333
PROJECTED ANSWERS: 9 TO 359

L2 9 SEA SSS SAM L1

=> d 12 1-9

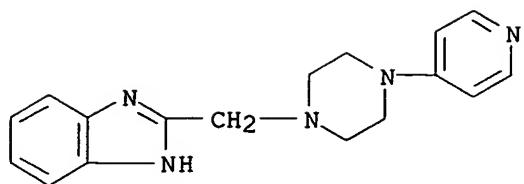
L2 ANSWER 1 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
RN 726174-08-9 REGISTRY
ED Entered STN: 13 Aug 2004
CN 1H-Benzimidazole, 2-[(4-[6-(methylthio)-2-pyridinyl]-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C18 H21 N5 S
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

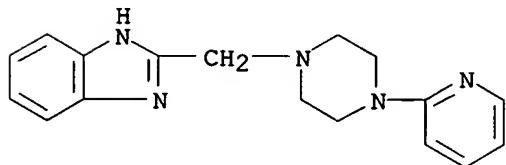
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
RN 689261-14-1 REGISTRY
ED Entered STN: 04 Jun 2004
CN 1H-Benzimidazole, 2-[(4-(4-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C17 H19 N5
CI COM
SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 ANSWER 3 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 587871-25-8 REGISTRY
 ED Entered STN: 18 Sep 2003
 CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, compd. with
 bromine (1:1) (9CI) (CA INDEX NAME)
 MF C17 H19 N5 . Br2
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
 CM 1
 CRN 70006-24-5
 CMF C17 H19 N5



CM 2

CRN 7726-95-6
 CMF Br2

Br—Br

2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

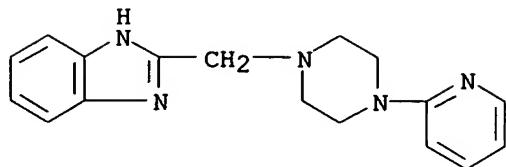
L2 ANSWER 4 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 587871-24-7 REGISTRY
 ED Entered STN: 18 Sep 2003
 CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-,
 (2S,3S)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C17 H19 N5 . 2 C4 H6 O6
 SR CA

10/699465

LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

CM 1

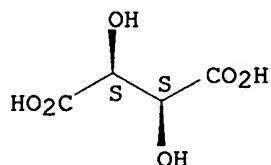
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 147-71-7
CMF C4 H6 O6

Absolute stereochemistry.

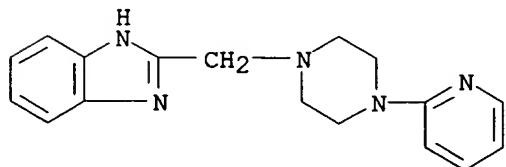


2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
RN 587871-22-5 REGISTRY
ED Entered STN: 18 Sep 2003
CN L-Glutamic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H19 N5 . C5 H9 N O4
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

CM 1

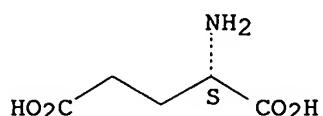
CRN 70006-24-5
CMF C17 H19 N5



CM 2

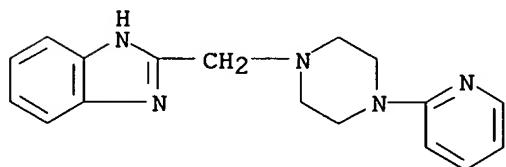
CRN 56-86-0
CMF C5 H9 N O4

Absolute stereochemistry.

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 6 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 587871-17-8 REGISTRY
 ED Entered STN: 18 Sep 2003
 CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
 rel-(2R,3R)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C17 H19 N5 . 2 C4 H6 O6
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL .

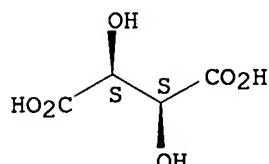
CM 1

CRN 70006-24-5
CMF C17 H19 N5

CM 2

CRN 133-37-9
CMF C4 H6 O6

Relative stereochemistry.

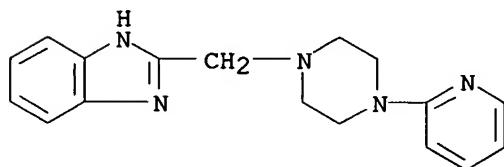


2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 7 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 587870-90-4 REGISTRY
 ED Entered STN: 18 Sep 2003
 CN Heptanoic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)
 MF C17 H19 N5 . C7 H14 O2
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

CM 1

CRN 70006-24-5
 CMF C17 H19 N5



CM 2

CRN 111-14-8
 CMF C7 H14 O2

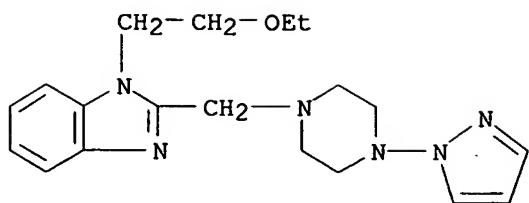
Me-(CH₂)₅-CO₂H

2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 8 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 140945-43-3 REGISTRY
 ED Entered STN: 01 May 1992
 CN 1H-Benzimidazole, 1-(2-ethoxyethyl)-2-[[4-(1H-pyrazol-1-yl)-1-piperazinyl]methyl]-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 1H-Benzimidazole, 1-(2-ethoxyethyl)-2-[[4-(1H-pyrazol-1-yl)-1-piperazinyl]methyl]-, (Z)-2-butenedioate (1:1)
 FS STEREOSEARCH
 MF C19 H26 N6 O . C4 H4 O4
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

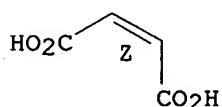
CRN 140945-42-2
 CMF C19 H26 N6 O



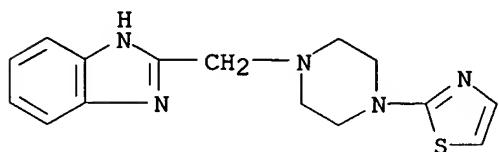
CM 2

CRN 110-16-7
CMF C4 H4 O4

Double bond geometry as shown.

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 9 OF 9 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 70006-25-6 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN 1H-Benzimidazole, 2-[(4-(2-thiazolyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN 2-[(4-(1,3-Thiazol-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole
 FS 3D CONCORD
 MF C15 H17 N5 S
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> s 11 sss full
 FULL SEARCH INITIATED 17:51:07 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 4514 TO ITERATE

100.0% PROCESSED 4514 ITERATIONS
SEARCH TIME: 00.00.01

109 ANSWERS

L3 109 SEA SSS FUL L1

=> file caplus		SINCE FILE	TOTAL
COST IN U.S. DOLLARS		ENTRY	SESSION
FULL ESTIMATED COST		184.48	184.69

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 FILE LAST UPDATED: 27 Apr 2006 (20060427/ED)

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<http://www.cas.org/infopolicy.html>

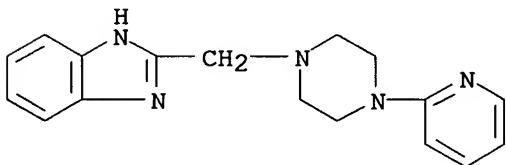
=> s 13
 L4 14 L3

=> d 14 1-14 bib abs hitstr

L4 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:1171443 CAPLUS
 DN 143:432676
 TI New pharmaceutical compositions for the treatment of sexual disorders
 IN Mendla, Klaus; Pyke, Robert; Eisenreich, Wolfram; Friedl, Thomas
 PA Boehringer Ingelheim International GmbH, Germany; Boehringer Ingelheim Pharmaceuticals, Inc.; Boehringer Ingelheim Pharma GmbH & Co. KG
 SO PCT Int. Appl., 71 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005102342	A1	20051103	WO 2005-EP4081	20050418
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,				

ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG
 US 2005245539 A1 20051103 US 2005-110449 20050420
 PRAI US 2004-564662P P 20040422
 US 2004-631800P P 20041130
 OS MARPAT 143:432676
 AB The invention relates to new pharmaceutical compns. for the treatment of sexual disorders and methods for the prepn. thereof. In a preferred embodiment, the instant invention is directed to pharmaceutical combinations comprising flibanserin as one active ingredient in combination with at least one addnl. active ingredient for the treatment of sexual disorders and methods for the prepn. thereof.
 IT 70006-24-5, ABT-724
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (new pharmaceutical compns. for treatment of sexual disorders)
 RN 70006-24-5 CAPLUS
 CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)

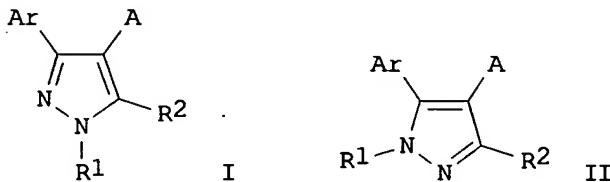


RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:546484 CAPLUS
 DN 141:106462
 TI Preparation of pyrazoles as inhibitors of HSP90
 IN Beswick, Mandy Christine; Drysdale, Martin James; Dymock, Brian William; McDonald, Edward
 PA Vernalis Cambridge Limited, UK; Cancer Research Technology Ltd.; The Institute of Cancer Research
 SO PCT Int. Appl., 98 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004056782	A1	20040708	WO 2003-GB5501	20031218
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

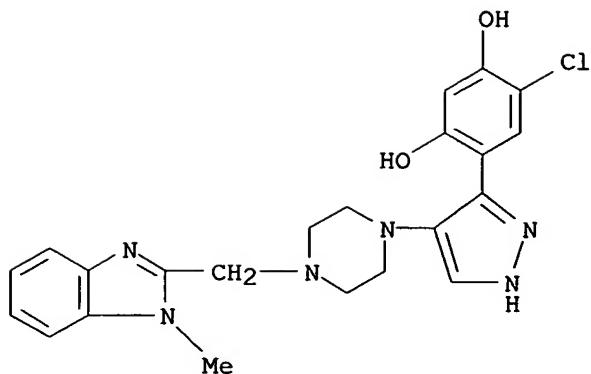
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG		
CA 2509403	AA 20040708	CA 2003-2509403	20031218
AU 2003292429	A1 20040714	AU 2003-292429	20031218
EP 1572664	A1 20050914	EP 2003-768007	20031218
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK		
BR 2003017492	A 20051116	BR 2003-17492	20031218
CN 1738804	A 20060222	CN 2003-80108919	20031218
JP 2006511571	T2 20060406	JP 2004-561628	20031218
PRAI GB 2002-29618	A 20021219		
WO 2003-GB5501	W 20031218		
OS MARPAT 141:106462			
GI			



AB The title compds. [I or II; Ar = (un)substituted aryl, arylalkyl, heteroaryl, heteroarylalkyl; R1 = H, alkyl; R2 = H, (un)substituted cycloalkyl, cycloalkenyl, alkyl, alkenyl, alkynyl, carboxyl, carboxamide or carboxyl ester group; A = non-arom. carbocyclic or heterocyclic ring wherein (i) a ring carbon is optionally substituted, and/or (ii) a ring nitrogen is optionally substituted by a group of formula - (Alk1)p(Cyc)n(Alk3)m(Z)r(Alk2)sQ where Alk1, Alk2 and Alk3 = alkyl; Cyc = carbocyclic or heterocyclic radical; m, n, p, r and s = 0-1; Z = O, S, CO, SO₂, etc.; Q = H, (un)substituted carbocyclic or heterocyclic radical] which are inhibitors of HSP90, and are of value in the treatment of diseases responsive to HSP90 inhibition such as cancer, were prep'd. E.g., a multi-step synthesis of 4-chloro-6-(4-piperazin-1-yl-1H-pyrazol-3-yl)benzene-1,3-diol which showed IC₅₀ of <50 .mu.M in the malachite green ATPase assay, was given.

IT 719287-59-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

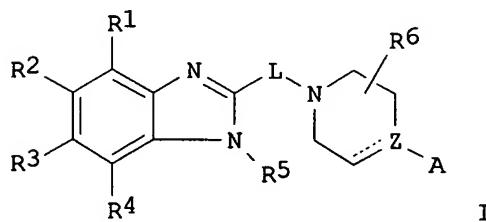
(prepn. of pyrazoles as inhibitors of HSP90)
RN 719287-59-9 CAPLUS
CN 1,3-Benzenediol, 4-chloro-6-[4-[4-[(1-methyl-1H-benzimidazol-2-yl)methyl]-1-piperazinyl]-1H-pyrazol-3-yl]- (9CI) (CA INDEX NAME)



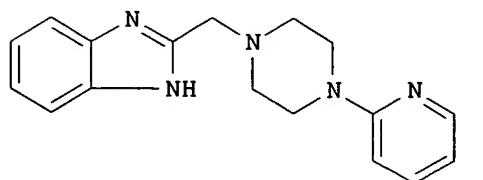
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:533974 CAPLUS
 DN 141:89087
 TI Preparation of 2-(piperazinylmethyl)-1H-benzimidazoles and related compounds that are useful in treating sexual dysfunction
 IN Cowart, Marlon D.; Patel, Meena V.; Kolasa, Teodozyi; Brioni, Jorge D.; Rohde, Jeffrey J.; Engstrom, Kenneth M.; Stewart, Andrew O.; Daanen, Jerome F.; Bhatia, Pramila A.
 PA USA
 SO U.S. Pat. Appl. Publ., 59 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004127504	A1	20040701	US 2003-656672	20030905
PRAI US 2002-408784P	P	20020906		
OS MARPAT 141:89087				
GI				



I



II

AB Title compds. (I) [wherein A = (un)substituted Ph, pyridinyl, pyrimidinyl, thienyl, pyrrolyl, furyl, imidazolyl, pyrazolyl, (is)oxazolyl, (iso)thiazolyl, triazolyl, tetrazolyl, etc.; L = CH₂, CH₂CH₂, CH₂CH₂CH₂, or CH₂CH₂CH₂CH₂; R₁-R₄ = independently H, alkoxy(carbonyl), alkenyl, (halo)alkyl, alkylthio, alkylsulfinyl, alkylsulfonyl, alkynyl, alkylcarbonyl(oxy), CO₂H, CN, CHO, halo(alkoxy), OH, hydroxyalkyl, SH, NO₂, or (un)substituted amino or carbamoyl; R₅ = H, alkoxy carbonyl, alkyl, (cyclo)alkylcarbonyl, arylcarbonyl, heterocyclylcarbonyl, or (un)substituted carbamoyl; R₆ = H or alkyl; Z = N, C, or CH; or pharmaceutically acceptable salt, ester, amide, or prodrug thereof] were prep'd. as dopamine agonists (no data) for the treatment of sexual dysfunction. For example, 2-chloromethylbenzimidazole and TEA were added to 1-(2-pyridyl)piperazine in DMF and the soln. stirred at 20.degree. for 16 h to give 2-[(4-pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole (II) in 72% yield. The latter induced penile erection in Wistar rats with an incidence of 83% at a dose of 0.03 .mu.mol/kg without inducing emesis.

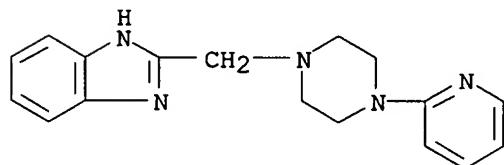
IT 70006-24-5P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(dopamine agonist; prepn. of (heterocyclylalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 70006-24-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



IT 70006-25-6P, 2-[(4-(1,3-Thiazol-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-17-9P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole maleate (1:1) 474417-18-0P, 2-[(4-(Pyrimidin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-19-1P, 2-[(4-(6-Methylpyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-20-4P, 2-[(4-(1H-Benzimidazol-2-yl)methyl)piperazin-1-yl]nicotinonitrile 474417-21-5P, 5,7-Dibromo-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-22-6P, 5-Fluoro-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-24-8P, Isobutyl 2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate 474417-25-9P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole 474417-26-0P, N,N-Dimethyl-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide 474417-39-5P, 2-[(2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-41-9P, 2-[(2S)-2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-43-1P, 2-[(2R)-2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-

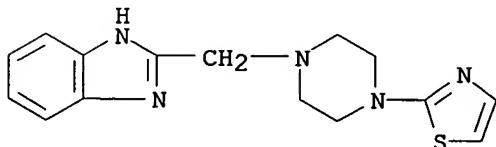
benzimidazole **474417-45-3P**, N-[2-[4-[(1H-Benzimidazol-2-yl)methyl]piperazin-1-yl]pyridin-3-yl]methanesulfonamide
474417-47-5P, 2-[[4-(3-Fluoropyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-48-6P**, 6-[4-[(1H-Benzimidazol-2-yl)methyl]piperazin-1-yl]pyridin-3-ol **474417-51-1P**, 2-[[4-(3-Methylpyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-52-2P** **587870-75-5P** **587870-76-6P**
587870-77-7P **587870-78-8P** **587870-79-9P**
587870-80-2P **587870-81-3P** **587870-82-4P**
587870-83-5P **587870-84-6P** **587870-85-7P**
587870-86-8P **587870-87-9P** **587870-88-0P**
587870-89-1P **587870-90-4P** **587870-91-5P**
587870-92-6P **587870-93-7P** **587870-94-8P**
587870-95-9P **587870-96-0P** **587870-97-1P**
587870-98-2P **587870-99-3P** **587871-00-9P**
587871-01-0P **587871-02-1P** **587871-03-2P**
587871-04-3P **587871-05-4P** **587871-06-5P**
587871-07-6P **587871-08-7P** **587871-09-8P**
587871-10-1P **587871-11-2P** **587871-12-3P**
587871-13-4P **587871-14-5P** **587871-15-6P**
587871-16-7P **587871-17-8P** **587871-18-9P**
587871-19-0P **587871-20-3P** **587871-21-4P**
587871-22-5P **587871-23-6P** **587871-24-7P**
587871-25-8P **587871-27-0P** **587871-29-2P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dopamine agonist; prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 70006-25-6 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-thiazolyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



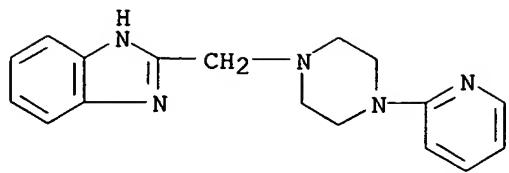
RN 474417-17-9 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

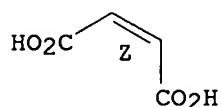
CMF C17 H19 N5



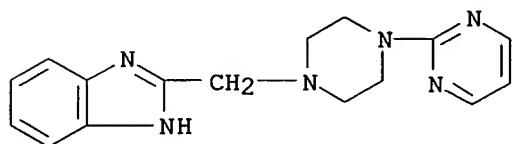
CM 2

CRN 110-16-7
CMF C4 H4 O4

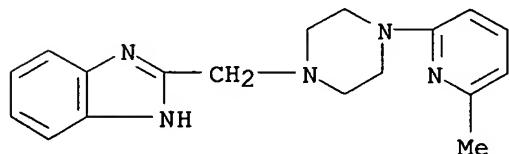
Double bond geometry as shown.



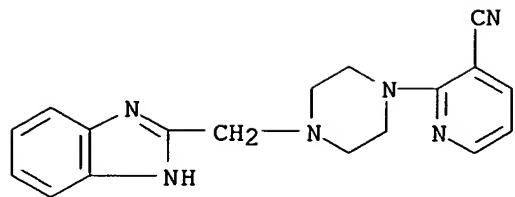
RN 474417-18-0 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyrimidinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-19-1 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(6-methyl-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

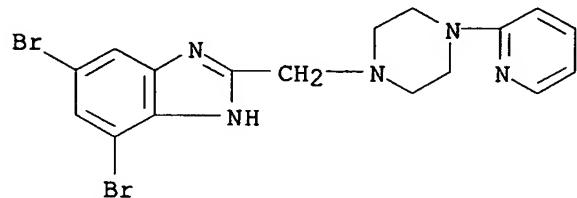


RN 474417-20-4 CAPLUS
CN 3-Pyridinecarbonitrile, 2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



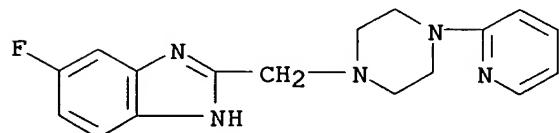
RN 474417-21-5 CAPLUS

CN 1H-Benzimidazole, 4,6-dibromo-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



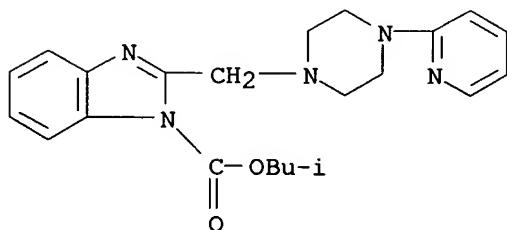
RN 474417-22-6 CAPLUS

CN 1H-Benzimidazole, 5-fluoro-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



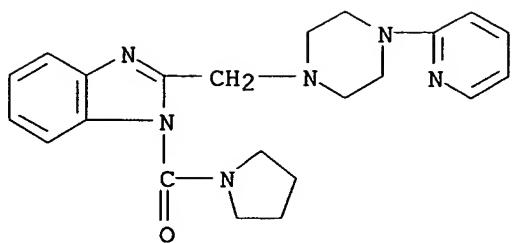
RN 474417-24-8 CAPLUS

CN 1H-Benzimidazole-1-carboxylic acid, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, 2-methylpropyl ester (9CI) (CA INDEX NAME)



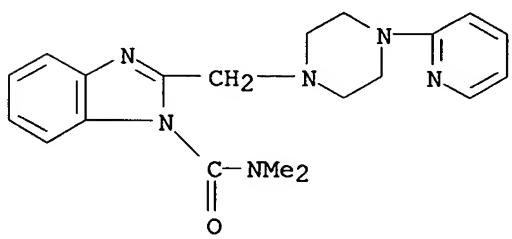
RN 474417-25-9 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1-(1-pyrrolidinylcarbonyl)- (9CI) (CA INDEX NAME)



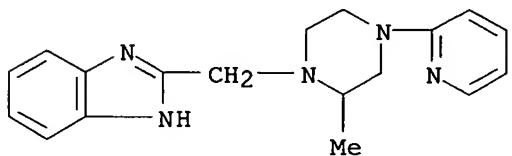
RN 474417-26-0 CAPLUS

CN 1H-Benzimidazole-1-carboxamide, N,N-dimethyl-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-39-5 CAPLUS

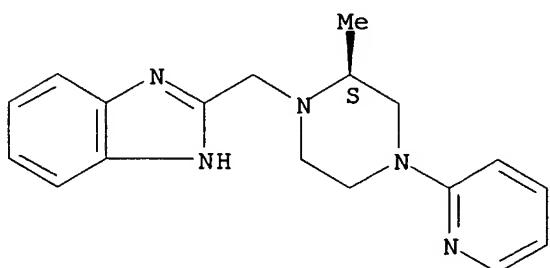
CN 1H-Benzimidazole, 2-[(2-methyl-4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-41-9 CAPLUS

CN 1H-Benzimidazole, 2-[(2S)-2-methyl-4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

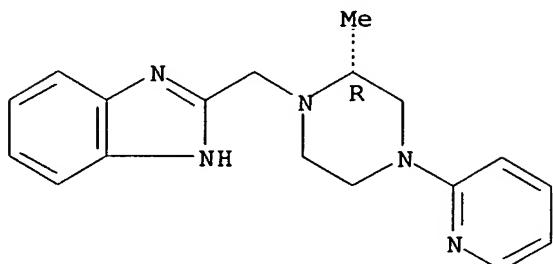
Absolute stereochemistry.



RN 474417-43-1 CAPLUS

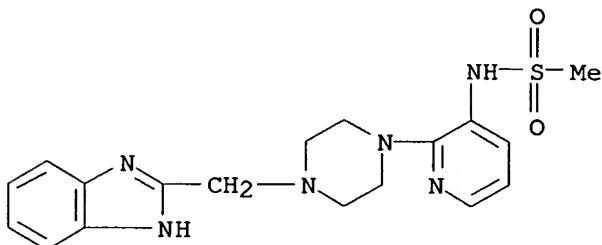
CN 1H-Benzimidazole, 2-[(2R)-2-methyl-4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



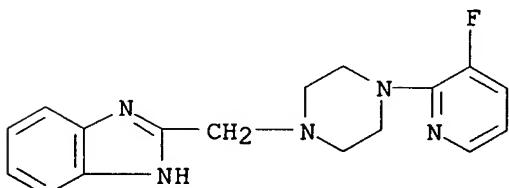
RN 474417-45-3 CAPLUS

CN Methanesulfonamide, N-[2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]-3-pyridinyl]- (9CI) (CA INDEX NAME)



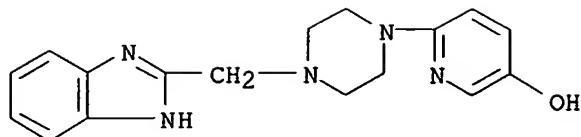
RN 474417-47-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-fluoro-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

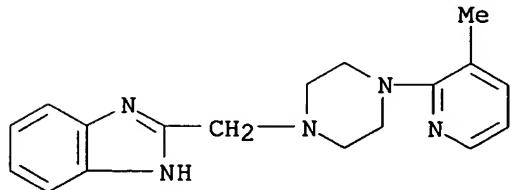


RN 474417-48-6 CAPLUS

CN 3-Pyridinol, 6-[(4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl)- (9CI) (CA INDEX NAME)

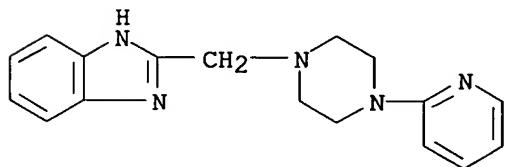


RN 474417-51-1 CAPLUS
 CN 1H-Benzimidazole, 2-[(4-(3-methyl-2-pyridinyl)-1-piperazinyl)methyl]-, (9CI) (CA INDEX NAME)



RN 474417-52-2 CAPLUS
 CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2R,3R)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

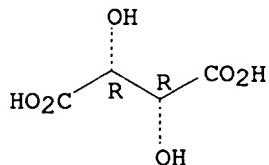
CM 1

CRN 70006-24-5
 CMF C17 H19 N5

CM 2

CRN 87-69-4
 CMF C4 H6 O6

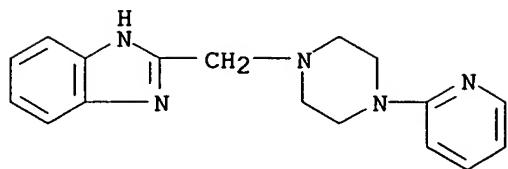
Absolute stereochemistry.



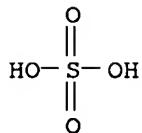
RN 587870-75-5 CAPLUS
 CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, sulfate

(1:2) (9CI) (CA INDEX NAME)

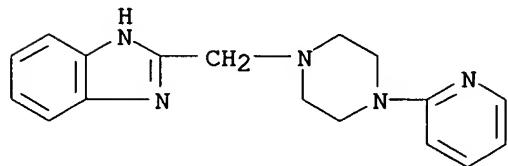
CM 1

CRN 70006-24-5
CMF C17 H19 N5

CM 2

CRN 7664-93-9
CMF H2 O4 SRN 587870-76-6 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
(2E)-2-butenedioate (2:3) (9CI) (CA INDEX NAME)

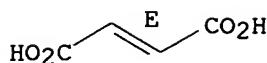
CM 1

CRN 70006-24-5
CMF C17 H19 N5

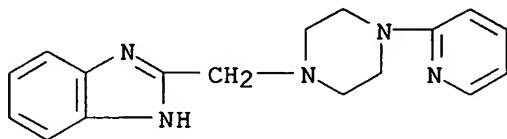
CM 2

CRN 110-17-8
CMF C4 H4 O4

Double bond geometry as shown.

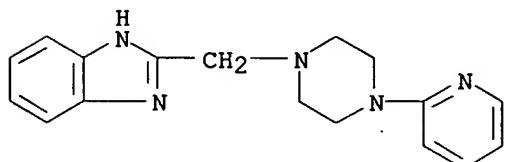


RN 587870-77-7 CAPLUS
 CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, trihydrochloride (9CI) (CA INDEX NAME)



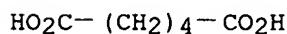
● 3 HCl

RN 587870-78-8 CAPLUS
 CN Hexanedioic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)
 CM 1
 CRN 70006-24-5
 CMF C17 H19 N5

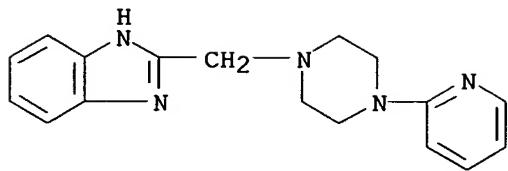


CM 2

CRN 124-04-9
 CMF C6 H10 O4



RN 587870-79-9 CAPLUS
 CN Alginic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)
 CM 1
 CRN 70006-24-5
 CMF C17 H19 N5



CM 2

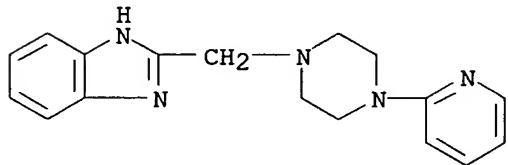
CRN 9005-32-7
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 587870-80-2 CAPLUS
 CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, 2-hydroxy-1,2,3-propanetricarboxylate (1:1) (9CI) (CA INDEX NAME)

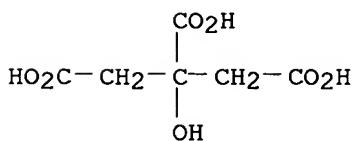
CM 1

CRN 70006-24-5
 CMF C17 H19 N5



CM 2

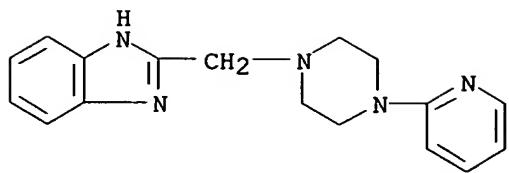
CRN 77-92-9
 CMF C6 H8 O7



RN 587870-81-3 CAPLUS
 CN L-Aspartic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

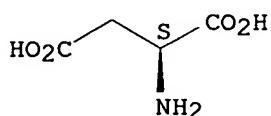
CRN 70006-24-5
 CMF C17 H19 N5



CM 2

CRN 56-84-8
CMF C4 H7 N O4

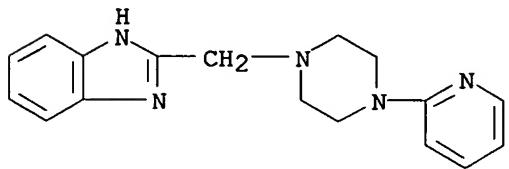
Absolute stereochemistry. Rotation (+).



RN 587870-82-4 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monobenzoate
(9CI) (CA INDEX NAME)

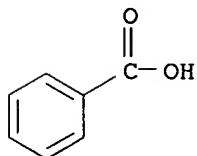
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 65-85-0
CMF C7 H6 O2

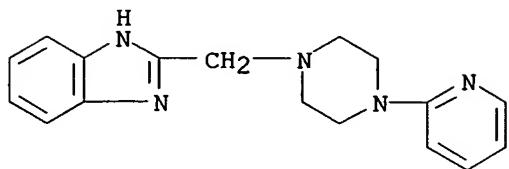


RN 587870-83-5 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-,

monobenzenesulfonate (9CI) (CA INDEX NAME)

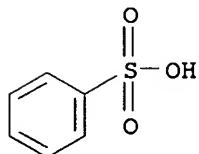
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 98-11-3
CMF C6 H6 O3 S

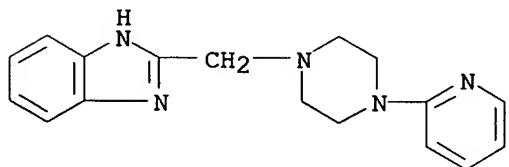


RN 587870-84-6 CAPLUS

CN Butanoic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

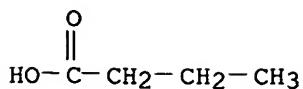
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 107-92-6
CMF C4 H8 O2



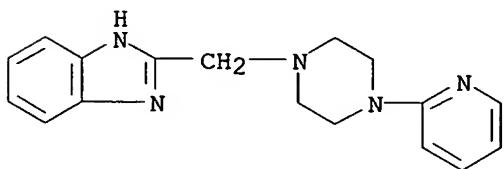
RN 587870-85-7 CAPLUS

CN 1,3-Cyclopentanedicarboxylic acid, 1,2,2-trimethyl-, (1R,3S)-rel-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

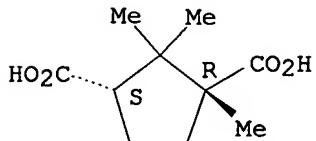


CM 2

CRN 5394-83-2

CMF C10 H16 O4

Relative stereochemistry.



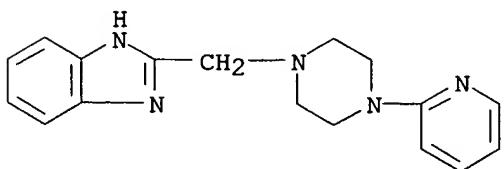
RN 587870-86-8 CAPLUS

CN Bicyclo[2.2.1]heptane-1-methanesulfonic acid, 7,7-dimethyl-2-oxo-, (1S,4R)-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

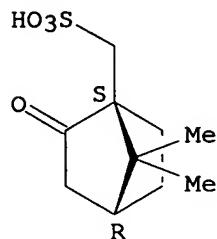
CMF C17 H19 N5



CM 2

CRN 3144-16-9
CMF C10 H16 O4 S

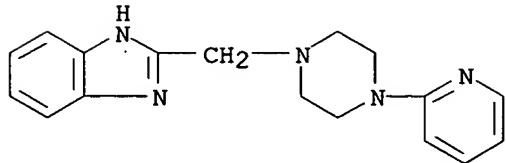
Absolute stereochemistry. Rotation (+).



RN 587870-87-9 CAPLUS

CN D-Gluconic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (2:1) (9CI) (CA INDEX NAME)

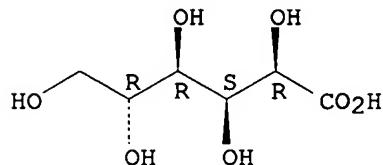
CM 1

CRN 70006-24-5
CMF C17 H19 N5

CM 2

CRN 526-95-4
CMF C6 H12 O7

Absolute stereochemistry.

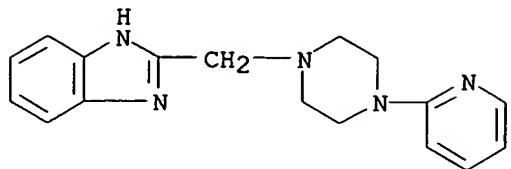


RN 587870-88-0 CAPLUS

CN 1,2,3-Propanetriol, 1-(dihydrogen phosphate), compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

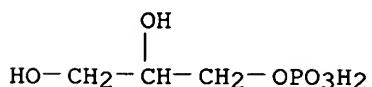
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 57-03-4
CMF C3 H9 O6 P

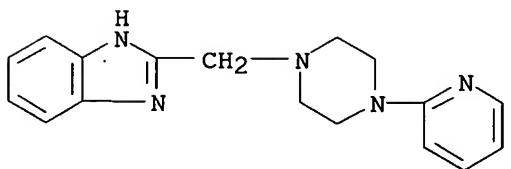


RN 587870-89-1 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, sulfate
(2:1) (9CI) (CA INDEX NAME)

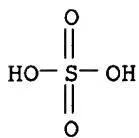
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 7664-93-9
CMF H2 O4 S



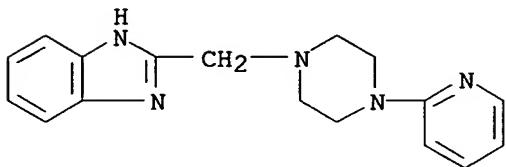
RN 587870-90-4 CAPLUS

CN Heptanoic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5



CM 2

CRN 111-14-8

CMF C7 H14 O2

Me- (CH₂)₅- CO₂H

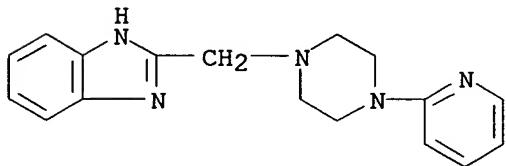
RN 587870-91-5 CAPLUS

CN Hexanoic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5



CM 2

CRN 142-62-1

CMF C6 H12 O2

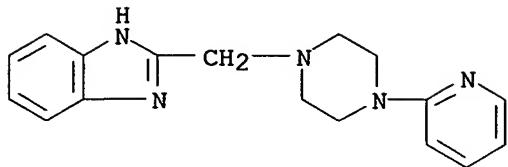
Me- (CH₂)₄- CO₂H

RN 587870-92-6 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,

(2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

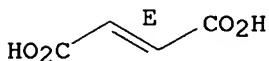
CM 1

CRN 70006-24-5
CMF C17 H19 N5

CM 2

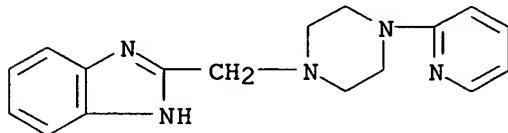
CRN 110-17-8
CMF C4 H4 O4

Double bond geometry as shown.



RN 587870-93-7 CAPLUS

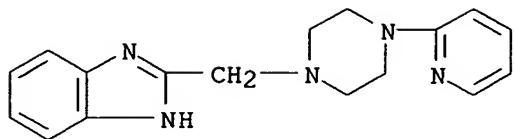
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

RN 587870-94-8 CAPLUS

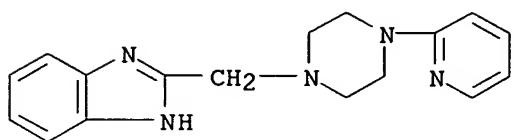
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 587870-95-9 CAPLUS

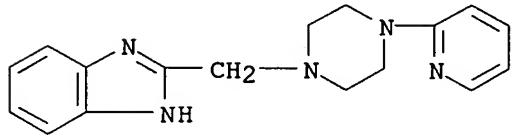
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monohydrobromide (9CI) (CA INDEX NAME)



● HBr

RN 587870-96-0 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monohydriodide (9CI) (CA INDEX NAME)



● HI

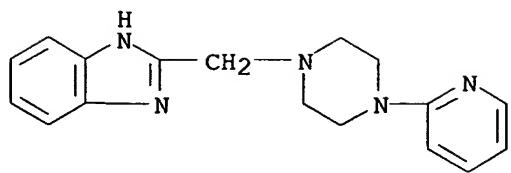
RN 587870-97-1 CAPLUS

CN Ethanesulfonic acid, 2-hydroxy-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5



CM 2

CRN 107-36-8
CMF C2 H6 O4 S

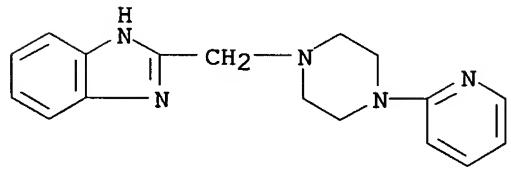
HO—CH₂—CH₂—SO₃H

RN 587870-98-2 CAPLUS

CN Propanoic acid, 2-hydroxy-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 50-21-5
CMF C3 H6 O3

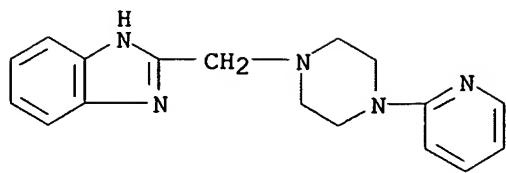
Me—
|
OH
—CH—CO₂H

RN 587870-99-3 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monomethanesulfonate (9CI) (CA INDEX NAME)

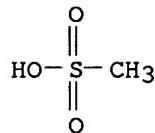
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 75-75-2
CMF C H4 O3 S

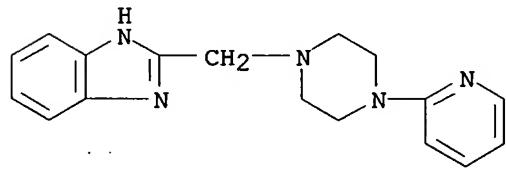


RN 587871-00-9 CAPLUS

CN 3-Pyridinecarboxylic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

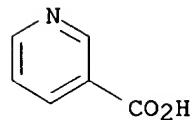
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 59-67-6
CMF C6 H5 N O2



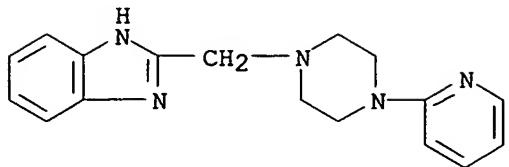
RN 587871-01-0 CAPLUS

CN 2-Naphthalenesulfonic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

10/699465

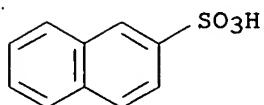
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

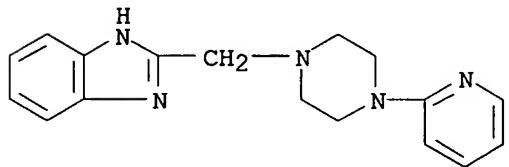
CRN 120-18-3
CMF C10 H8 O3 S



RN 587871-02-1 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, ethanedioate
(1:1) (9CI) (CA INDEX NAME)

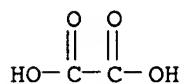
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 144-62-7
CMF C2 H2 O4



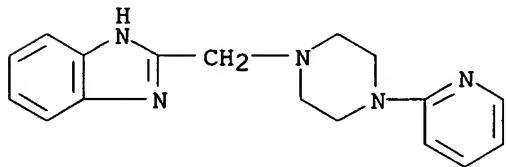
RN 587871-03-2 CAPLUS

10/699465

CN 2-Naphthalenecarboxylic acid, 4,4'-methylenebis[3-hydroxy-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

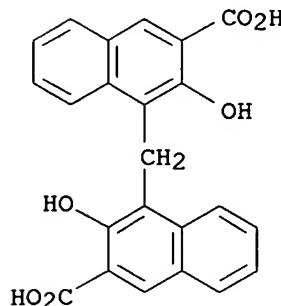
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 130-85-8
CMF C23 H16 O6

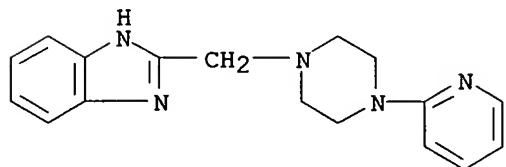


RN 587871-04-3 CAPLUS

CN Pectin, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 9000-69-5
 CMF Unspecified
 CCI PMS, MAN

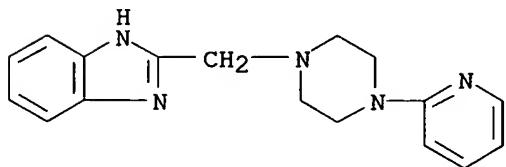
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 587871-05-4 CAPLUS

CN Peroxymonosulfuric acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

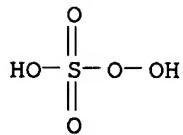
CM 1

CRN 70006-24-5
 CMF C17 H19 N5



CM 2

CRN 7722-86-3
 CMF H2 O5 S

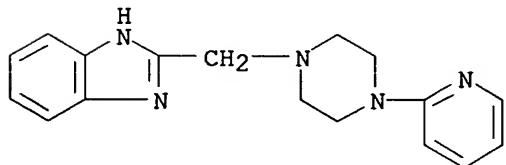


RN 587871-06-5 CAPLUS

CN Benzenepropanoic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
 CMF C17 H19 N5



CM 2

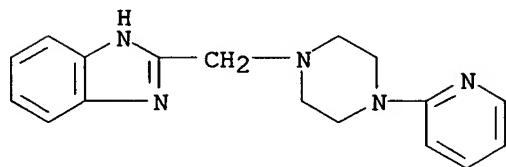
CRN 501-52-0
CMF C9 H10 O2

Ph—CH₂—CH₂—CO₂H

RN 587871-07-6 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, compd. with 2,4,6-trinitrophenol (1:1) (9CI) (CA INDEX NAME)

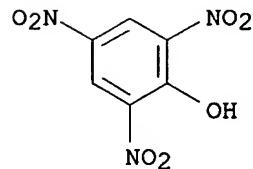
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

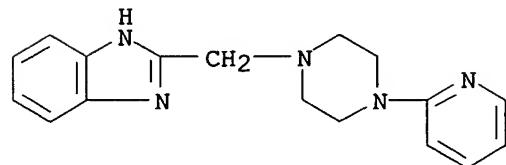
CRN 88-89-1
CMF C6 H3 N3 O7



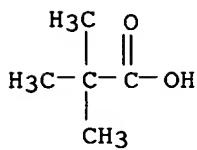
RN 587871-08-7 CAPLUS
CN Propanoic acid, 2,2-dimethyl-, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

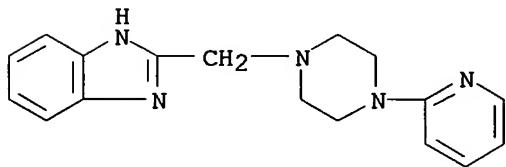
CRN 70006-24-5
CMF C17 H19 N5



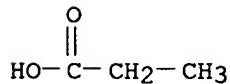
CM 2

CRN 75-98-9
CMF C5 H10 O2RN 587871-09-8 CAPLUS
CN Propanoic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

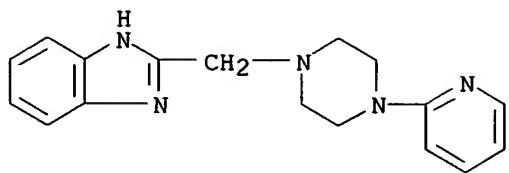
CRN 70006-24-5
CMF C17 H19 N5

CM 2

CRN 79-09-4
CMF C3 H6 O2RN 587871-10-1 CAPLUS
CN Butanedioic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

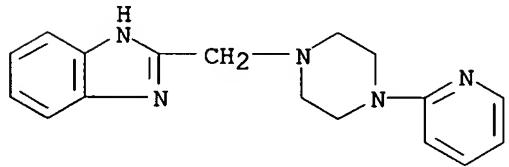
CRN 110-15-6
CMF C4 H6 O4

HO₂C—CH₂—CH₂—CO₂H

RN 587871-11-2 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, sulfate (1:1) (9CI) (CA INDEX NAME)

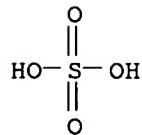
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 7664-93-9
CMF H2 O4 S

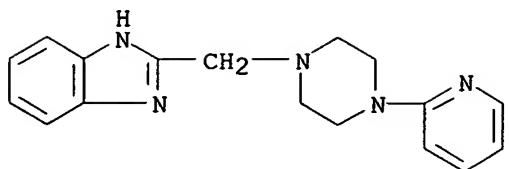


RN 587871-12-3 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, 2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

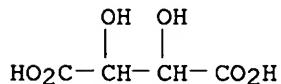
CRN 70006-24-5

CMF C17 H19 N5



CM 2

CRN 526-83-0
CMF C4 H6 O6

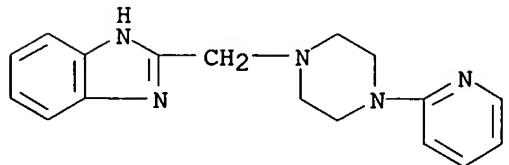


RN 587871-13-4 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, 2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

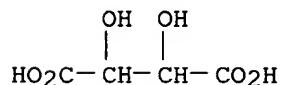
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 526-83-0
CMF C4 H6 O6

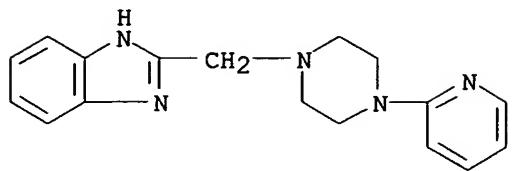


RN 587871-14-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

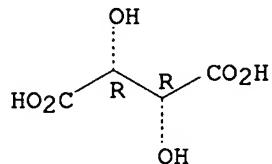
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 87-69-4
CMF C4 H6 O6

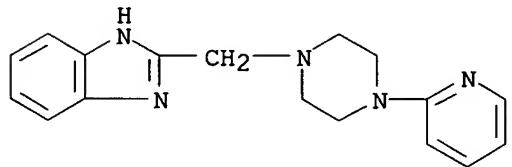
Absolute stereochemistry.



RN 587871-15-6 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
(2S,3S)-2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

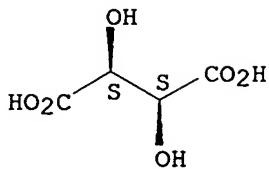
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 147-71-7
CMF C4 H6 O6

Absolute stereochemistry.



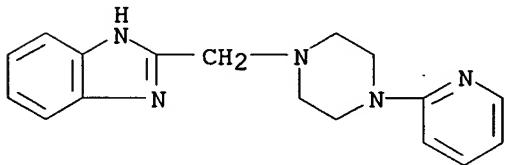
RN 587871-16-7 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
rel-(2R,3R)-2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

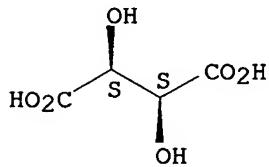


CM 2

CRN 133-37-9

CMF C4 H6 O6

Relative stereochemistry.



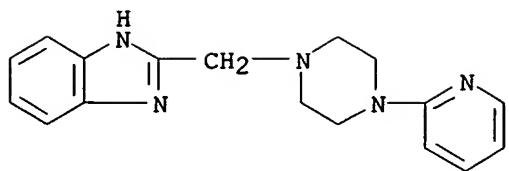
RN 587871-17-8 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
rel-(2R,3R)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

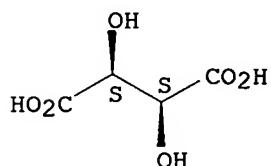
CMF C17 H19 N5



CM 2

CRN 133-37-9
CMF C4 H6 O6

Relative stereochemistry.

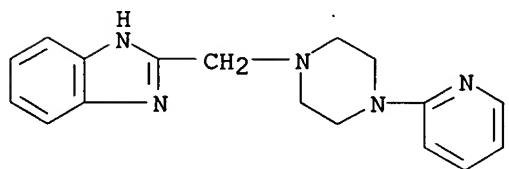


RN 587871-18-9 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
rel-(2R,3S)-2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

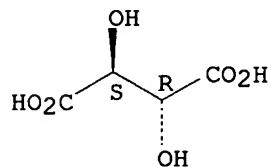
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 147-73-9
CMF C4 H6 O6

Relative stereochemistry.



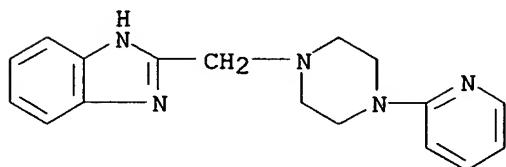
RN 587871-19-0 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
rel-(2R,3S)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

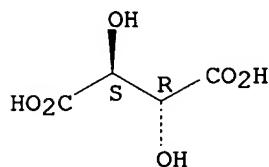


CM 2

CRN 147-73-9

CMF C4 H6 O6

Relative stereochemistry.



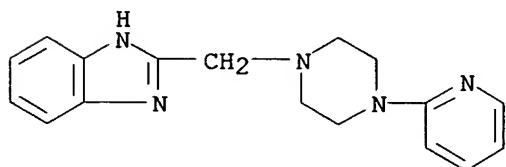
RN 587871-20-3 CAPLUS

CN Thiocyanic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5



CM 2

CRN 463-56-9

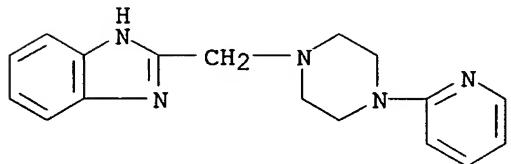
CMF C H N S

HS-C≡N

RN 587871-21-4 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, phosphate
(1:1) (9CI) (CA INDEX NAME)

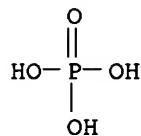
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

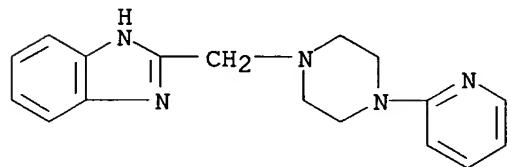
CRN 7664-38-2
CMF H3 O4 P



RN 587871-22-5 CAPLUS
CN L-Glutamic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

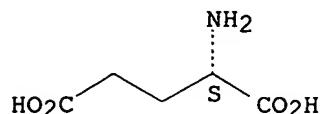
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 56-86-0
 CMF C5 H9 N 04

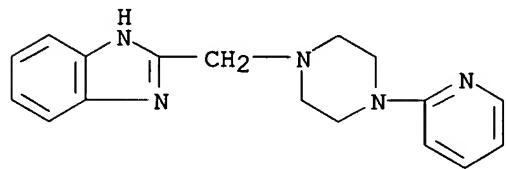
Absolute stereochemistry.



RN 587871-23-6 CAPLUS
 CN Carbonic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

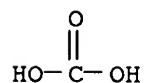
CM 1

CRN 70006-24-5
 CMF C17 H19 N5



CM 2

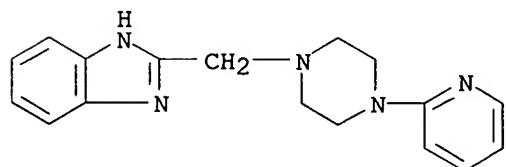
CRN 463-79-6
 CMF C H2 O3



RN 587871-24-7 CAPLUS
 CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, (2S,3S)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

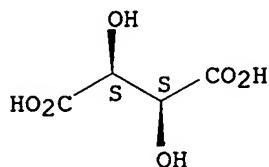
CRN 70006-24-5
 CMF C17 H19 N5



CM 2

CRN 147-71-7
CMF C4 H6 O6

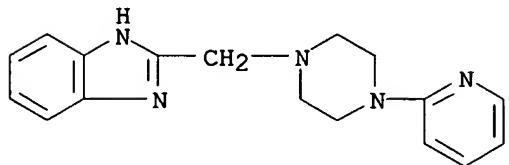
Absolute stereochemistry.



RN 587871-25-8 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, compd. with bromine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

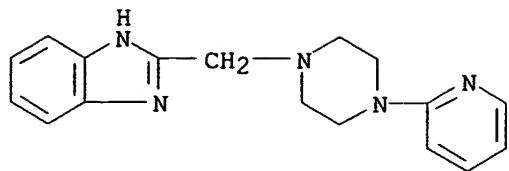
CRN 7726-95-6
CMF Br2

Br- Br

RN 587871-27-0 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

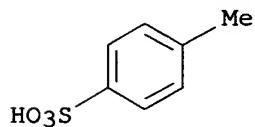
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 104-15-4
CMF C7 H8 O3 S

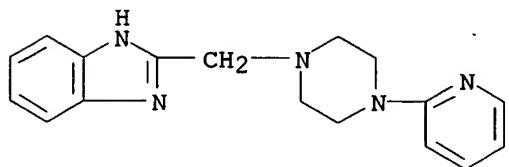


RN 587871-29-2 CAPLUS

CN Undecanoic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 112-37-8
CMF C11 H22 O2

HO₂C-(CH₂)₉-Me

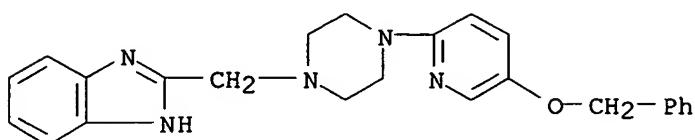
IT 474417-50-0P, 2-[(4-[5-(Benzyl)pyridin-2-yl]piperazin-1-yl)methyl]-1H-benzimidazole

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 474417-50-0 CAPLUS

CN 1H-Benzimidazole, 2-[(4-[5-(phenylmethoxy)-2-pyridinyl]-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



IT 587870-74-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

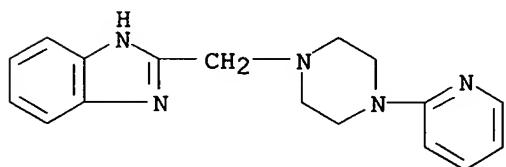
RN 587870-74-4 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, phosphate (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

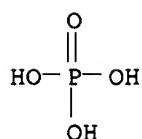
CMF C17 H19 N5



CM 2

CRN 7664-38-2

CMF H3 O4 P



L4 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

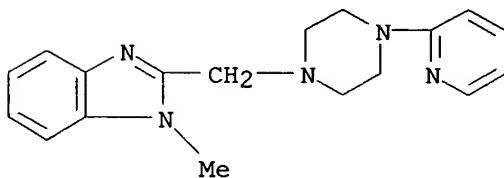
AN 2004:465135 CAPLUS

DN 141:150462

TI Discovery of 2-(4-Pyridin-2-ylpiperazin-1-ylmethyl)-1H-benzimidazole (ABT-724), a Dopaminergic Agent with a Novel Mode of Action for the Potential Treatment of Erectile Dysfunction

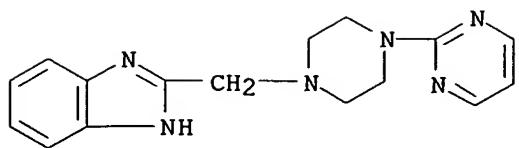
AU Cowart, Marlon; Latshaw, Steven P.; Bhatia, Pramila; Daanen, Jerome F.;

Rohde, Jeffrey; Nelson, Sherry L.; Patel, Meena; Kolasa, Teodozyi; Nakane, Masaki; Uchic, Marie E.; Miller, Loan N.; Terranova, Marc A.; Chang, Renjie; Donnelly-Roberts, Diana L.; Namovic, Marian T.; Hollingsworth, Peter R.; Martino, Brenda R.; Lynch, James J., III; Sullivan, James P.; Hsieh, Gin C.; Moreland, Robert B.; Brioni, Jorge D.; Stewart, Andrew O.
 CS Department of Neuroscience Research, Abbott Laboratories, Abbott Park, IL, 60064-6123, USA
 SO Journal of Medicinal Chemistry (2004), 47(15), 3853-3864
 CODEN: JMCMAR; ISSN: 0022-2623
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 141:150462
 AB A new class of agents with potential utility for the treatment of erectile dysfunction has been discovered, guided by the hypothesis that selective D4 agonists are erectogenic but devoid of the side effects typically assocd. with dopaminergic agents. The lead agent 2-(4-pyridin-2-ylpiperazin-1-ylmethyl)-1H-benzimidazole (1, ABT-724) was discovered by optimization of a series of benzimidazole arylpiperazines. This highly selective D4 agonist was found to be very potent and efficacious *in vivo*, eliciting penile erections in rats at a dose of 0.03 .mu.mol/kg, with a pos. response rate of 77% erectile incidence. Even at high doses, it was devoid of side effects in animal models of central nervous system behaviors, emesis, or nausea. The structure-activity relationship of the parent benzimidazole series leading to 1 is described, with the detailed *in vitro* and *in vivo* profiles described. Distinctive structural features were discovered that are assocd. with D4 selective agonism in this series of analogs.
 IT 392321-86-7P 474417-18-0P 474417-19-1P
 474417-20-4P 474417-21-5P 474417-22-6P
 474417-25-9P 474417-26-0P 474417-41-9P
 474417-43-1P 474417-47-5P 726173-96-2P
 726174-01-2P 726174-02-3P 726174-03-4P
 726174-04-5P 726174-05-6P 726174-06-7P
 726174-07-8P 726174-08-9P 726174-12-5P
 726174-13-6P 726174-14-7P 726174-15-8P
 726174-16-9P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. and structure-activity relationship studies of ABT-724 and arylpiperazine-piperidine analogs, as dopaminergic agents with a novel mode of action for treatment of erectile dysfunction)
 RN 392321-86-7 CAPLUS
 CN 1H-Benzimidazole, 1-methyl-2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-(9CI) (CA INDEX NAME)



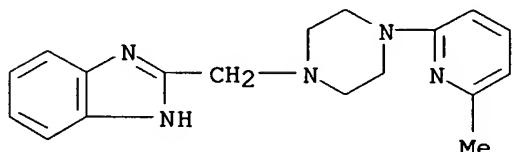
RN 474417-18-0 CAPLUS
 CN 1H-Benzimidazole, 2-[[4-(2-pyrimidinyl)-1-piperazinyl]methyl]-(9CI) (CA

INDEX NAME)



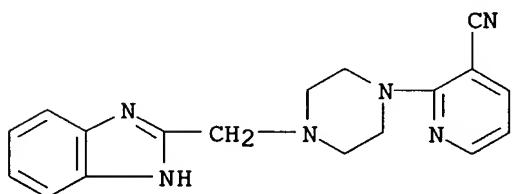
RN 474417-19-1 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(6-methyl-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



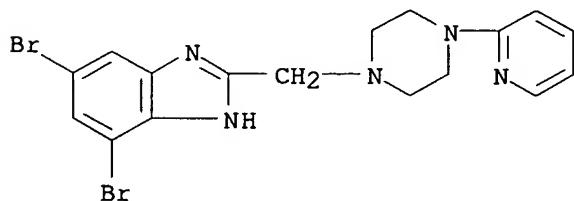
RN 474417-20-4 CAPLUS

CN 3-Pyridinecarbonitrile, 2-[(4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



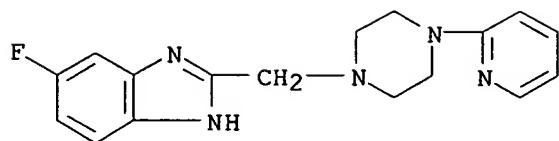
RN 474417-21-5 CAPLUS

CN 1H-Benzimidazole, 4,6-dibromo-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



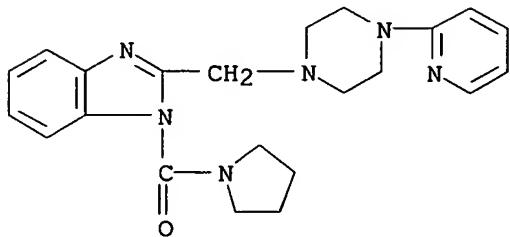
RN 474417-22-6 CAPLUS

CN 1H-Benzimidazole, 5-fluoro-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



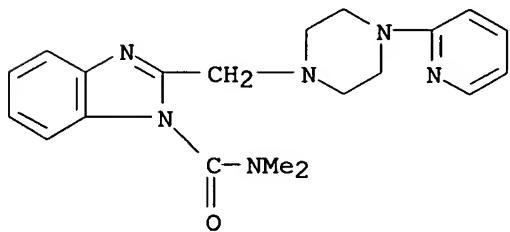
RN 474417-25-9 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1-(1-pyrrolidinylcarbonyl)- (9CI) (CA INDEX NAME)



RN 474417-26-0 CAPLUS

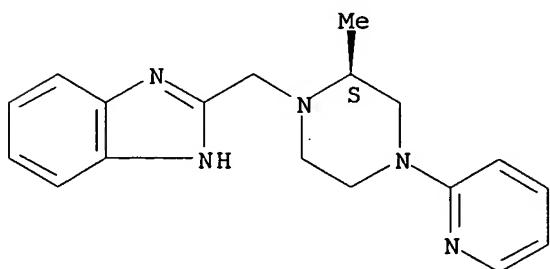
CN 1H-Benzimidazole-1-carboxamide, N,N-dimethyl-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-41-9 CAPLUS

CN 1H-Benzimidazole, 2-[(2S)-2-methyl-4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

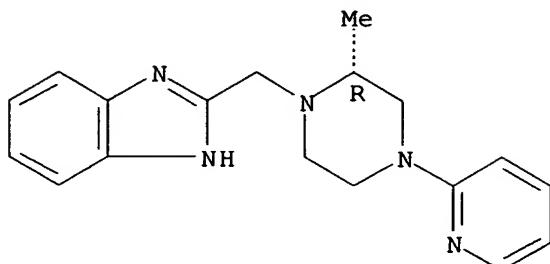
Absolute stereochemistry.



RN 474417-43-1 CAPLUS

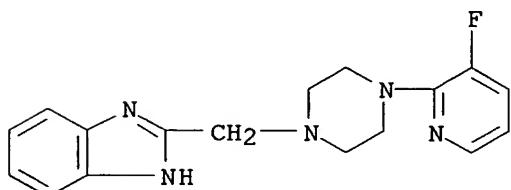
CN 1H-Benzimidazole, 2-[(2R)-2-methyl-4-(2-pyridinyl)-1-piperazinyl]methyl-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



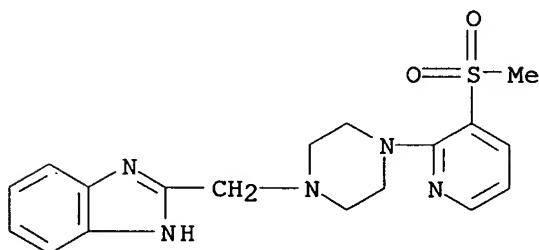
RN 474417-47-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-fluoro-2-pyridinyl)-1-piperazinyl)methyl]-
(9CI) (CA INDEX NAME)



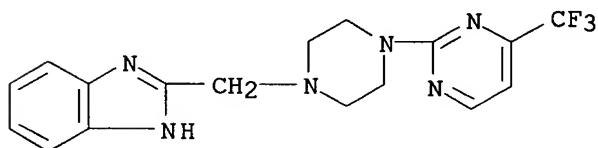
RN 726173-96-2 CAPLUS

CN 1H-Benzimidazole, 2-[(4-[3-(methylsulfonyl)-2-pyridinyl]-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



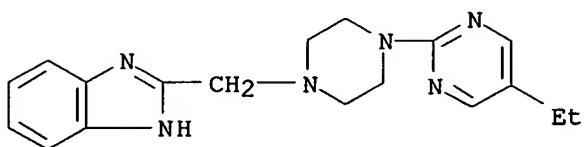
RN 726174-01-2 CAPLUS

CN 1H-Benzimidazole, 2-[(4-[4-(trifluoromethyl)-2-pyrimidinyl]-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



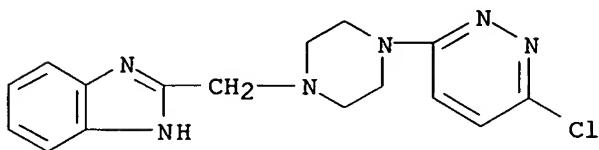
RN 726174-02-3 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(5-ethyl-2-pyrimidinyl)-1-piperazinyl]methyl]-
(9CI) (CA INDEX NAME)



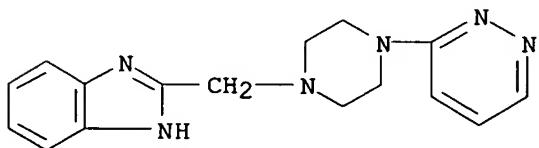
RN 726174-03-4 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(6-chloro-3-pyridazinyl)-1-piperazinyl]methyl]-
(9CI) (CA INDEX NAME)



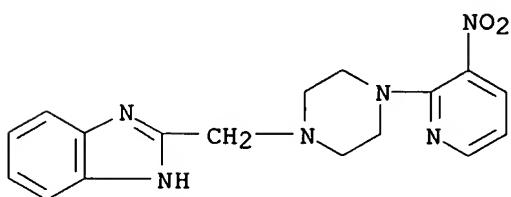
RN 726174-04-5 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(3-pyridazinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



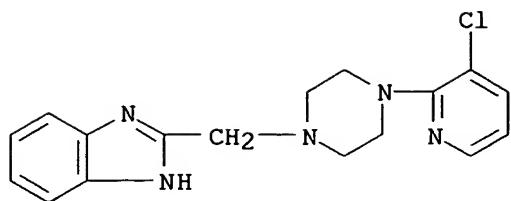
RN 726174-05-6 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(3-nitro-2-pyridinyl)-1-piperazinyl]methyl]- (9CI)
(CA INDEX NAME)



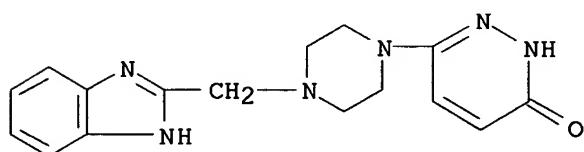
RN 726174-06-7 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(3-chloro-2-pyridinyl)-1-piperazinyl]methyl]-
(9CI) (CA INDEX NAME)



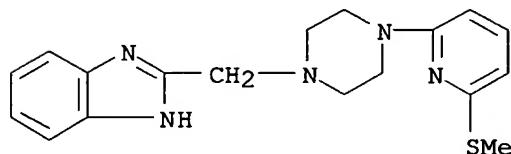
RN 726174-07-8 CAPLUS

CN 3(2H)-Pyridazinone, 6-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



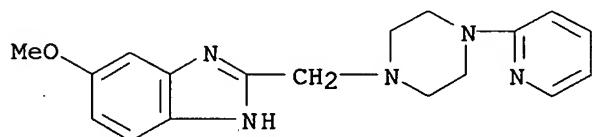
RN 726174-08-9 CAPLUS

CN 1H-Benzimidazole, 2-[4-[6-(methylthio)-2-pyridinyl]-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



RN 726174-12-5 CAPLUS

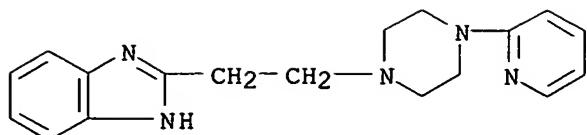
CN 1H-Benzimidazole, 5-methoxy-2-[4-(2-pyridinyl)-1-piperazinyl]methyl]-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

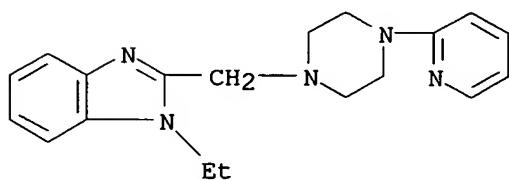
RN 726174-13-6 CAPLUS

CN 1H-Benzimidazole, 2-[2-[4-(2-pyridinyl)-1-piperazinyl]ethyl]-, dihydrochloride (9CI) (CA INDEX NAME)

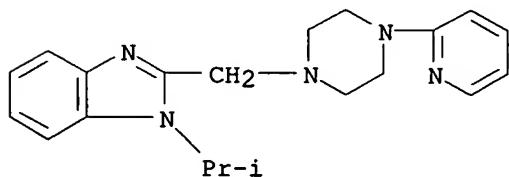


●2 HCl

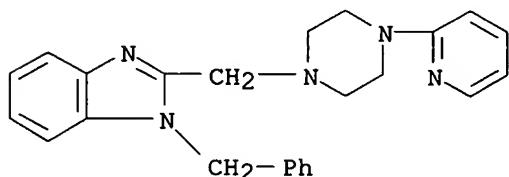
RN 726174-14-7 CAPLUS
 CN 1H-Benzimidazole, 1-ethyl-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI)
 (CA INDEX NAME)



RN 726174-15-8 CAPLUS
 CN 1H-Benzimidazole, 1-(1-methylethyl)-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

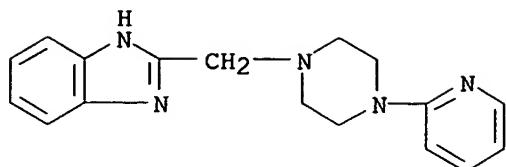


RN 726174-16-9 CAPLUS
 CN 1H-Benzimidazole, 1-(phenylmethyl)-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



IT 70006-24-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. and structure-activity relationship studies of ABT-724 and
 arylpiperazine-piperidine analogs, as dopaminergic agents with a novel
 mode of action for treatment of erectile dysfunction)
 RN 70006-24-5 CAPLUS
 CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

INDEX NAME)



IT 474417-17-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and structure-activity relationship studies of ABT-724 and
 arylpiperazine-piperidine analogs, as dopaminergic agents with a novel
 mode of action for treatment of erectile dysfunction)

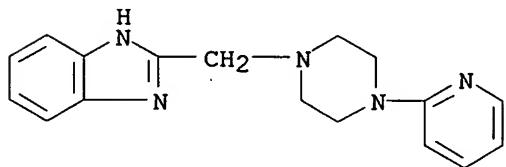
RN 474417-17-9 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-,
 (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

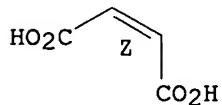


CM 2

CRN 110-16-7

CMF C4 H4 O4

Double bond geometry as shown.



RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:388216 CAPLUS

DN 141:99528

TI Activation of dopamine D4 receptors by ABT-724 induces penile erection in rats

AU Brioni, Jorge D.; Moreland, Robert B.; Cowart, Marlon; Hsieh, Gin C.;
 Stewart, Andrew O.; Hedlund, Petter; Donnelly-Roberts, Diana L.; Nakane,

CS Masaki; Lynch, James J., III; Kolasa, Teodozyi; Polakowski, James S.; Osinski, Mark A.; Marsh, Kennan; Andersson, Karl-Erik; Sullivan, James P. Neuroscience Research, Global Pharmaceutical Research and Development, Abbott Laboratories, Abbott Park, IL, 60064, USA

SO Proceedings of the National Academy of Sciences of the United States of America (2004), 101(17), 6758-6763
CODEN: PNASA6; ISSN: 0027-8424

PB National Academy of Sciences

DT Journal

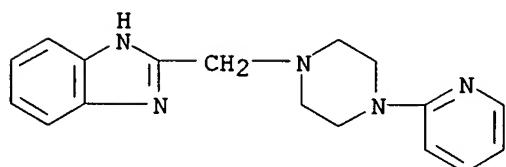
LA English

AB Apomorphine, a nonselective dopamine receptor agonist, facilitates penile erection and is effective in patients suffering from erectile dysfunction. The specific dopamine receptor subtype(s) responsible for its erectogenic effect is not known. Here we report that the dopamine D4 receptor plays a role in the regulation of penile function. ABT-724 is a selective dopamine D4 receptor agonist that activates human dopamine D4 receptors with an EC50 of 12.4 nM and 61% efficacy, with no effect on dopamine D1, D2, D3, or D5 receptors. ABT-724 dose-dependently facilitates penile erection when given s.c. to conscious rats, an effect that is blocked by haloperidol and clozapine but not by domperidone. A proerectile effect is obsd. after intracerebroventricular but not intrathecal administration, suggesting a supraspinal site of action. S.c. injections of ABT-724 increase intracavernosal pressure in awake freely moving rats. In the presence of sildenafil, a potentiation of the proerectile effect of ABT-724 is obsd. in conscious rats. The ability of ABT-724 to facilitate penile erection together with the favorable side-effect profile indicates that ABT-724 could be useful for the treatment of erectile dysfunction.

IT 70006-24-5, ABT 724
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ABT-724 activation of D4 receptors induces penile erection)

RN 70006-24-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:236724 CAPLUS
DN 140:399345
TI Dopamine D4 ligands and models of receptor activation:
2-(4-pyridin-2-ylpiperazin-1-ylmethyl)-1H-benzimidazole and related heteroarylalkylarylpiperazines exhibit a substituent effect responsible for additional efficacy tuning
AU Stewart, Andrew O.; Cowart, Marlon D.; Moreland, Robert B.; Latshaw, Steve P.; Matulenko, Mark A.; Bhatia, Pramila A.; Wang, Xueqing; Daanen, Jerome F.; Nelson, Sherry L.; Terranova, Marc A.; Namovic, Marian T.; Donnelly-Roberts, Diana L.; Miller, Loan N.; Nakane, Masaki; Sullivan,

James P.; Brioni, Jorge D.

CS Global Pharmaceutical Research and Development, Department R4ND,
Neuroscience Research, Abbott Laboratories, Abbott Park, IL, 60064-6115,
USA

SO Journal of Medicinal Chemistry (2004), 47(9), 2348-2355
CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

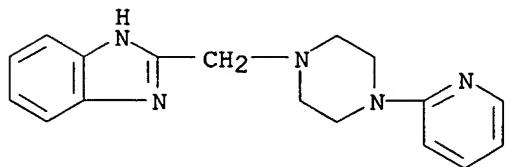
OS CASREACT 140:399345

AB A series of subtype selective dopamine D4 receptor ligands from the heteroarylmethylphenylpiperazine class have been discovered that exhibit a remarkable structure-activity relation (SAR), revealing a substituent effect in which regiosubstitution on the terminal arylpiperazine ring can modulate functional or intrinsic activity. Other structure-dependent efficacy studies in the dopamine D4 field have suggested a crit. interaction of the heteroarylmethyl moiety with specific protein microdomains in controlling intrinsic activity. The authors studies indicate that for some binding orientations, the phenylpiperazine moiety also plays a key role in detg. efficacy. These data also implicate a kinetic or efficiency term, contained within measured functional affinities for agonists, which support a sequential binding and conformational stabilization model for receptor activation. The structural similarity between partial agonist and antagonist, within this subset of ligands, and lack of bioisosterism for this substituent effect are key phenomena for these hypotheses.

IT 70006-24-5P, 2-(4-Pyridin-2-ylpiperazin-1-ylmethyl)-1H-benzimidazole
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(dopamine D4 ligands and models of receptor activation using 4-pyridinylpiperazinylmethyl-1H-benzimidazole and related heteroarylmethylarylpiperazines which exhibit a substituent effect)

RN 70006-24-5 CAPLUS

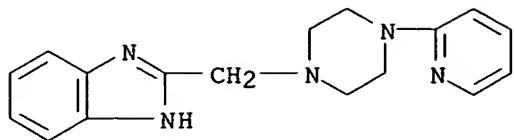
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



IT 587870-94-8P 689261-12-9P 689261-15-2P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dopamine D4 ligands and models of receptor activation using 4-pyridinylpiperazinylmethyl-1H-benzimidazole and related heteroarylmethylarylpiperazines which exhibit a substituent effect)

RN 587870-94-8 CAPLUS

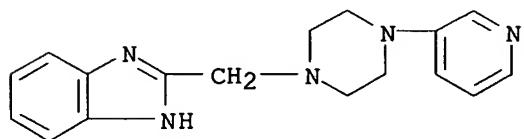
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 689261-12-9 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



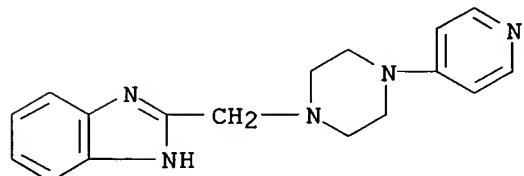
RN 689261-15-2 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(4-pyridinyl)-1-piperazinyl)methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 689261-14-1

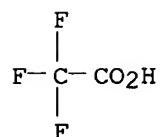
CMF C17 H19 N5



CM 2

CRN 76-05-1

CMF C2 H F3 O2

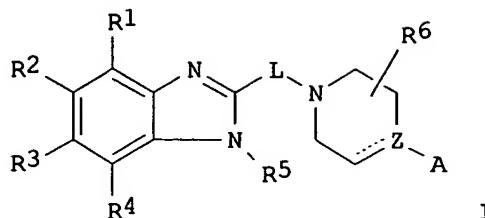


RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD

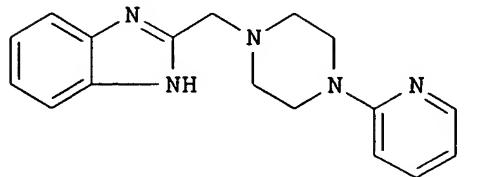
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:678507 CAPLUS
 DN 139:214467
 TI Preparation of 2-(piperazinylmethyl)-1H-benzimidazoles and related compounds that are useful in treating sexual dysfunction
 IN Cowart, Marlon D.; Bhatia, Pramila A.; Daanen, Jerome F.; Stewart, Andrew O.; Patel, Meena V.; Kolasa, Teodozyj; Brioni, Jorge D.; Rohde, Jeffrey; Engstrom, Kenneth M.
 PA Abbott Laboratories, USA
 SO U.S. Pat. Appl. Publ., 53 pp., Cont.-in-part of U.S. Ser. No. 94,265.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003162790	A1	20030828	US 2002-236812	20020906
	US 6960589	B2	20051101		
	US 2002169167	A1	20021114	US 2002-94265	20020308
	US 7022728	B2	20060404		
	CA 2478028	AA	20030918	CA 2003-2478028	20030304
	WO 2003076431	A1	20030918	WO 2003-US6406	20030304
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2003219981 A1 20030922 AU 2003-219981 20030304 BR 2003005708 A 20040928 BR 2003-5708 20030304 EP 1483258 A1 20041208 EP 2003-716268 20030304					
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
JP 2006508019 T2 20060309 JP 2003-574648 20030304					
PRAI	US 2001-274805P	P	20010309		
	US 2001-296078P	P	20010605		
	US 2002-94265	A2	20020308		
	US 2001-340452P	P	20011214		
	US 2002-236812	A	20020906		
WO 2003-US6406 W 20030304					
OS	MARPAT 139:214467				
GI					



I



II

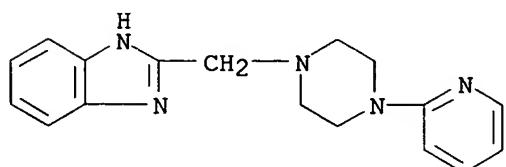
AB Title compds. (I) [wherein A = (un)substituted Ph, pyridinyl, pyrimidinyl, thienyl, pyrrolyl, furyl, imidazolyl, pyrazolyl, (is)oxazolyl, (iso)thiazolyl, triazolyl, tetrazolyl, etc.; L = CH₂, CH₂CH₂, CH₂CH₂CH₂; R₁-R₄ = independently H, alkoxy(carbonyl), alkenyl, (halo)alkyl, alkylthio, alkylsulfinyl, alkylsulfonyl, alkynyl, alkylcarbonyl(oxy), CO₂H, CN, CHO, halo(alkoxy), OH, hydroxyalkyl, SH, NO₂, or (un)substituted amino or carbamoyl; R₅ = H, alkoxy carbonyl, alkyl, (cyclo)alkylcarbonyl, arylcarbonyl, heterocyclylcarbonyl, or (un)substituted carbamoyl; R₆ = H or alkyl; Z = N, C, or CH; or pharmaceutically acceptable salt, ester, amide, or prodrug thereof] were prepd. as dopamine agonists (no data) for the treatment of sexual dysfunction. For example, 2-chloromethylbenzimidazole and TEA were added to 1-(2-pyridyl)piperazine in DMF and the soln. stirred at 20.degree. for 16 h to give 2-[(4-pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole (II) in 72% yield. The latter induced penile erection in Wistar rats with an incidence of 83% at a dose of 0.03 .mu.mol/kg without inducing emesis.

IT 70006-24-5P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (dopamine agonist; prepn. of (heterocyclylalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 70006-24-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



IT 70006-25-6P, 2-[(4-(1,3-Thiazol-2-yl)piperazin-1-yl)methyl]-1H-

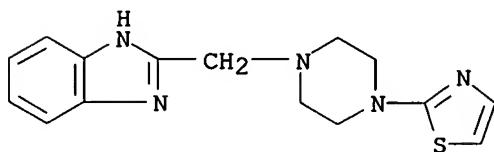
benzimidazole **474417-17-9P**, 2-[[4-(Pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole maleate (1:1) **474417-18-0P**, 2-[[4-(Pyrimidin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-19-1P**, 2-[[4-(6-Methylpyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-20-4P**, 2-[4-[(1H-Benzimidazol-2-yl)methyl]piperazin-1-yl]nicotinonitrile **474417-21-5P**, 5,7-Dibromo-2-[[4-(pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-22-6P**, 5-Fluoro-2-[[4-(pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-24-8P**, Isobutyl 2-[[4-(pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole-1-carboxylate **474417-25-9P**, 2-[[4-(Pyridin-2-yl)piperazin-1-yl]methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole **474417-26-0P**, N,N-Dimethyl-2-[[4-(pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole-1-carboxamide **474417-39-5P**, 2-[[2-Methyl-4-(pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-41-9P**, 2-[(2S)-2-Methyl-4-(pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-43-1P**, 2-[(2R)-2-Methyl-4-(pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-45-3P**, N-[2-[4-[(1H-Benzimidazol-2-yl)methyl]piperazin-1-yl]pyridin-3-yl]methanesulfonamide **474417-47-5P**, 2-[[4-(3-Fluoropyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-48-6P**, 6-[4-[(1H-Benzimidazol-2-yl)methyl]piperazin-1-yl]pyridin-3-ol **474417-51-1P**, 2-[[4-(3-Methylpyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-52-2P**, 2-[[4-(Pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole bis((L)tartrate)

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dopamine agonist; prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 70006-25-6 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-thiazolyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



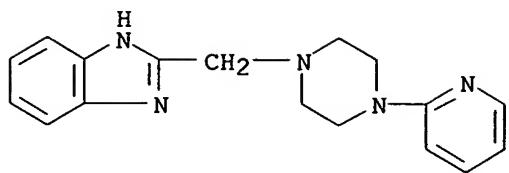
RN 474417-17-9 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

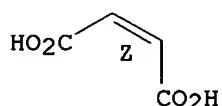
CMF C17 H19 N5



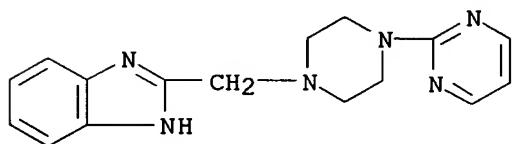
CM 2

CRN 110-16-7
CMF C4 H4 O4

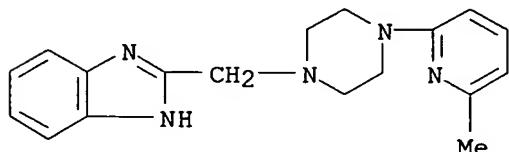
Double bond geometry as shown.



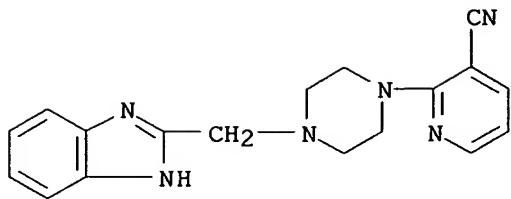
RN 474417-18-0 CAPLUS
CN 1H-Benzimidazole, 2-[4-(2-pyrimidinyl)-1-piperazinyl]methyl- (9CI) (CA INDEX NAME)



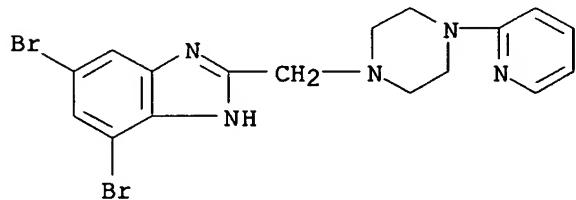
RN 474417-19-1 CAPLUS
CN 1H-Benzimidazole, 2-[4-(6-methyl-2-pyridinyl)-1-piperazinyl]methyl- (9CI) (CA INDEX NAME)



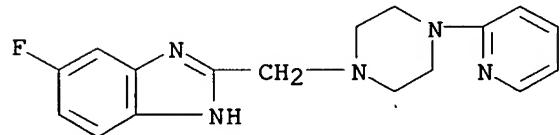
RN 474417-20-4 CAPLUS
CN 3-Pyridinecarbonitrile, 2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



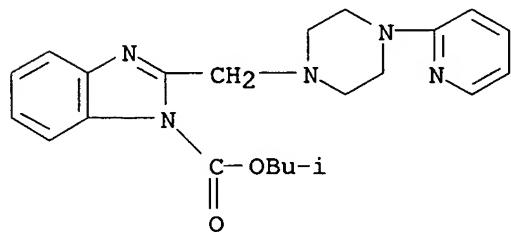
RN 474417-21-5 CAPLUS
CN 1H-Benzimidazole, 4,6-dibromo-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



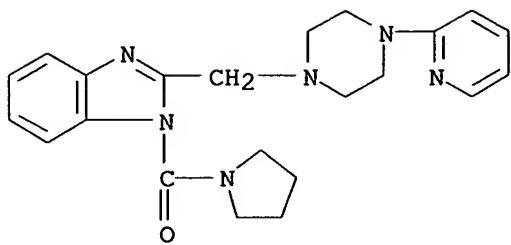
RN 474417-22-6 CAPLUS
CN 1H-Benzimidazole, 5-fluoro-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-24-8 CAPLUS
CN 1H-Benzimidazole-1-carboxylic acid, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, 2-methylpropyl ester (9CI) (CA INDEX NAME)

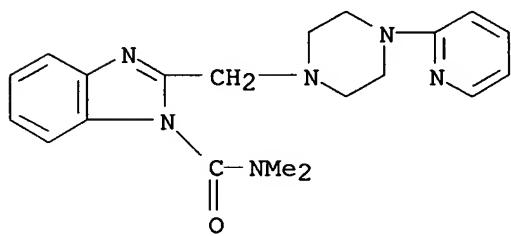


RN 474417-25-9 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1-(1-pyrrolidinylcarbonyl)- (9CI) (CA INDEX NAME)



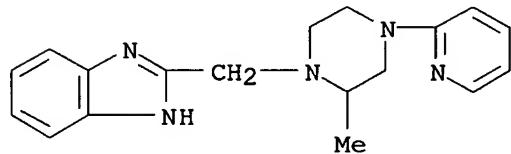
RN 474417-26-0 CAPLUS

CN 1H-Benzimidazole-1-carboxamide, N,N-dimethyl-2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



RN 474417-39-5 CAPLUS

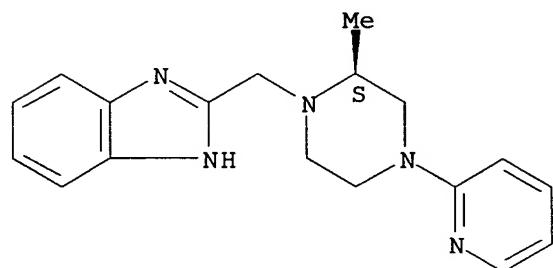
CN 1H-Benzimidazole, 2-[[2-methyl-4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



RN 474417-41-9 CAPLUS

CN 1H-Benzimidazole, 2-[(2S)-2-methyl-4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)

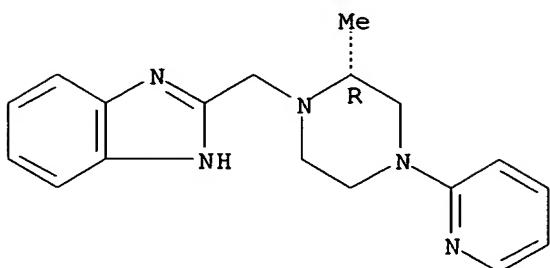
Absolute stereochemistry.



RN 474417-43-1 CAPLUS

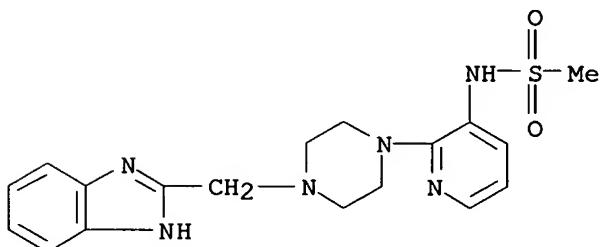
CN 1H-Benzimidazole, 2-[(2R)-2-methyl-4-(2-pyridinyl)-1-piperazinyl]methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



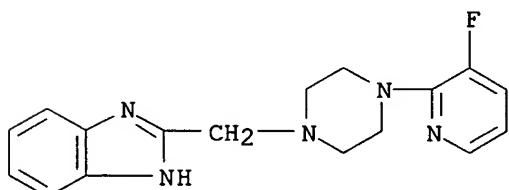
RN 474417-45-3 CAPLUS

CN Methanesulfonamide, N-[2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]-3-pyridinyl]- (9CI) (CA INDEX NAME)



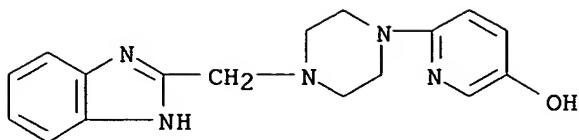
RN 474417-47-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-fluoro-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

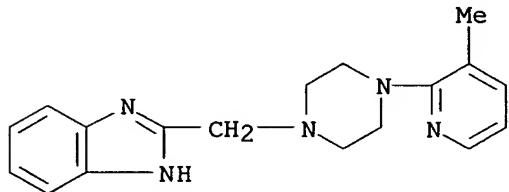


RN 474417-48-6 CAPLUS

CN 3-Pyridinol, 6-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)

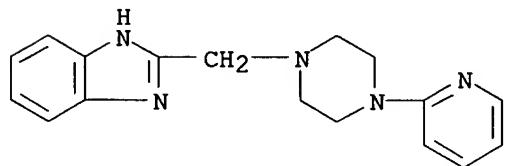


RN 474417-51-1 CAPLUS
 CN 1H-Benzimidazole, 2-[(4-(3-methyl-2-pyridinyl)-1-piperazinyl)methyl]-, (9CI) (CA INDEX NAME)



RN 474417-52-2 CAPLUS
 CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2R,3R)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

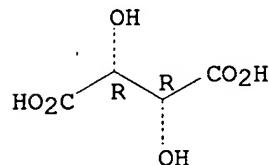
CM 1

CRN 70006-24-5
 CMF C17 H19 N5

CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.

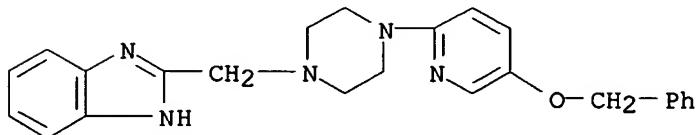


IT 474417-50-0P, 2-[(4-(5-(Benzyl)pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermed; prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 474417-50-0 CAPLUS

CN 1H-Benzimidazole, 2-[(4-[5-(phenylmethoxy)-2-pyridinyl]-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



IT 587870-74-4P 587870-75-5P 587870-76-6P
 587870-77-7P 587870-78-8P 587870-79-9P
 587870-80-2P 587870-81-3P 587870-82-4P
 587870-83-5P 587870-84-6P 587870-85-7P
 587870-86-8P 587870-87-9P 587870-88-0P
 587870-89-1P 587870-90-4P 587870-91-5P
 587870-92-6P 587870-93-7P 587870-94-8P
 587870-95-9P 587870-96-0P 587870-97-1P
 587870-98-2P 587870-99-3P 587871-00-9P
 587871-01-0P 587871-02-1P 587871-03-2P
 587871-04-3P 587871-05-4P 587871-06-5P
 587871-07-6P 587871-08-7P 587871-09-8P
 587871-10-1P 587871-11-2P 587871-12-3P
 587871-13-4P 587871-14-5P 587871-15-6P
 587871-16-7P 587871-17-8P 587871-18-9P
 587871-19-0P 587871-20-3P 587871-21-4P
 587871-22-5P 587871-23-6P 587871-24-7P
 587871-25-8P 587871-27-0P 587871-29-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

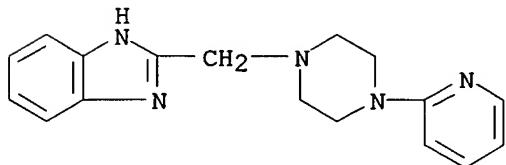
RN 587870-74-4 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, phosphate (1:2) (9CI) (CA INDEX NAME)

CM 1

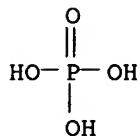
CRN 70006-24-5

CMF C17 H19 N5



CM 2

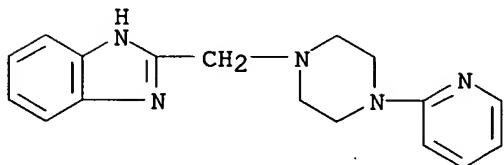
CRN 7664-38-2
CMF H3 O4 P



RN 587870-75-5 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, sulfate (1:2) (9CI) (CA INDEX NAME)

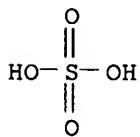
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

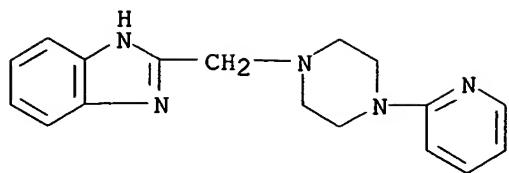
CRN 7664-93-9
CMF H2 O4 S



RN 587870-76-6 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, (2E)-2-butenedioate (2:3) (9CI) (CA INDEX NAME)

CM 1

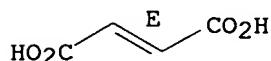
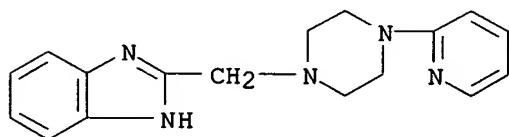
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 110-17-8
CMF C4 H4 O4

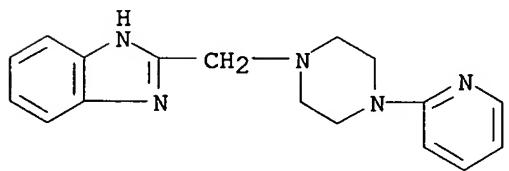
Double bond geometry as shown.

RN 587870-77-7 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, trihydrochloride (9CI) (CA INDEX NAME)

● 3 HCl

RN 587870-78-8 CAPLUS
CN Hexanedioic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5

CM 2

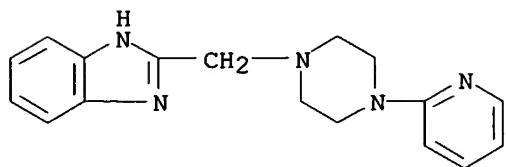
CRN 124-04-9
CMF C6 H10 O4

HO₂C—(CH₂)₄—CO₂H

RN 587870-79-9 CAPLUS
CN Alginic acid, compd. with 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

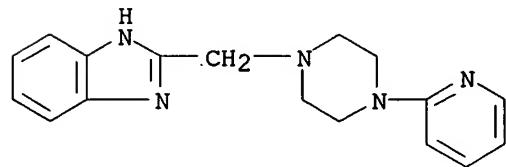
CRN 9005-32-7
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 587870-80-2 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, 2-hydroxy-1,2,3-propanetricarboxylate (1:1) (9CI) (CA INDEX NAME)

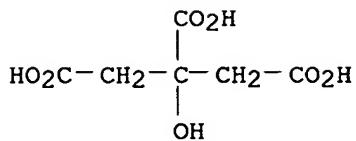
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 77-92-9
CMF C6 H8 O7



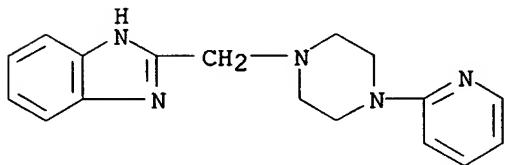
RN 587870-81-3 CAPLUS

CN L-Aspartic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

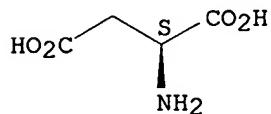


CM 2

CRN 56-84-8

CMF C4 H7 N O4

Absolute stereochemistry. Rotation (+).



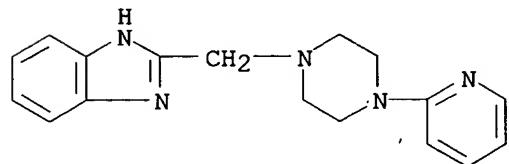
RN 587870-82-4 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monobenzoate (9CI) (CA INDEX NAME)

CM 1

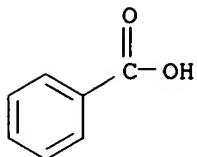
CRN 70006-24-5

CMF C17 H19 N5



CM 2

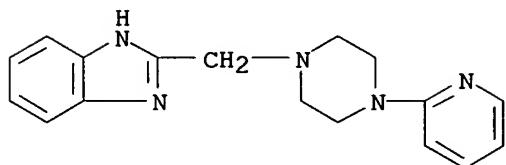
CRN 65-85-0
CMF C7 H6 O2



RN 587870-83-5 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monobenzenesulfonate (9CI) (CA INDEX NAME)

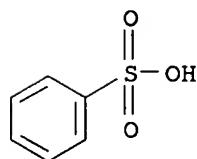
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

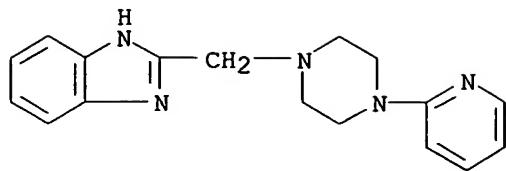
CRN 98-11-3
CMF C6 H6 O3 S



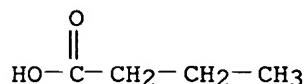
RN 587870-84-6 CAPLUS
CN Butanoic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



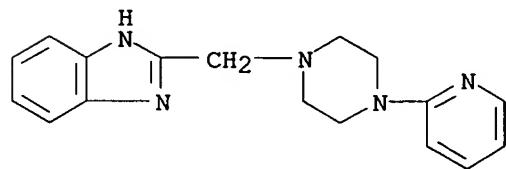
CM 2

CRN 107-92-6
CMF C4 H8 O2

RN 587870-85-7 CAPLUS

CN 1,3-Cyclopentanedicarboxylic acid, 1,2,2-trimethyl-, (1R,3S)-rel-, compd.
with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1)
(9CI) (CA INDEX NAME)

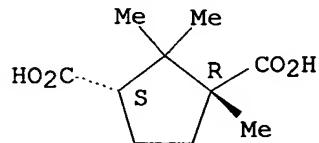
CM 1

CRN 70006-24-5
CMF C17 H19 N5

CM 2

CRN 5394-83-2
CMF C10 H16 O4

Relative stereochemistry.



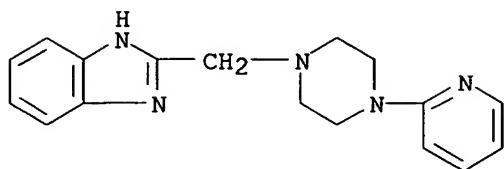
RN 587870-86-8 CAPLUS

CN Bicyclo[2.2.1]heptane-1-methanesulfonic acid, 7,7-dimethyl-2-oxo-,
(1S,4R)-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-

benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

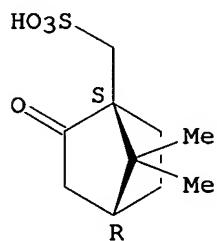
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 3144-16-9
CMF C10 H16 O4 S

Absolute stereochemistry. Rotation (+).

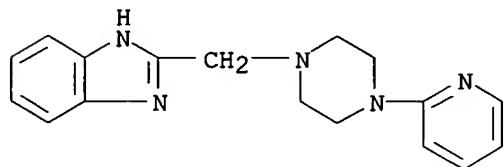


RN 587870-87-9 CAPLUS

CN D-Gluconic acid, compd. with 2-[(2-pyridinyl)-1-piperazinyl]methyl-1H-benzimidazole (2:1) (9CI) (CA INDEX NAME)

CM 1

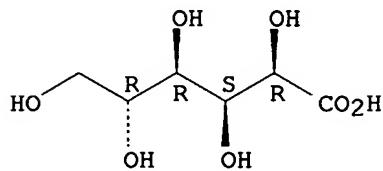
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 526-95-4
CMF C6 H12 O7

Absolute stereochemistry.



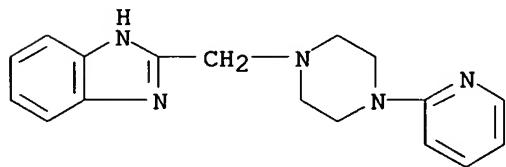
RN 587870-88-0 CAPLUS

CN 1,2,3-Propanetriol, 1-(dihydrogen phosphate), compd. with
2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 70006-24-5

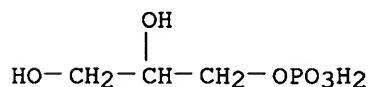
CMF C17 H19 N5



CM 2

CRN 57-03-4

CMF C3 H9 O6 P



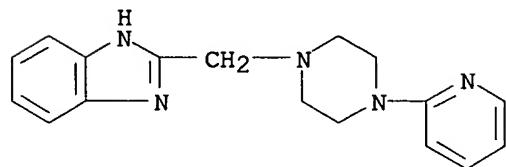
RN 587870-89-1 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, sulfate
(2:1) (9CI) (CA INDEX NAME)

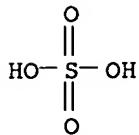
CM 1

CRN 70006-24-5

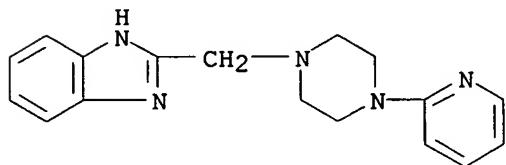
CMF C17 H19 N5



CM 2

CRN 7664-93-9
CMF H2 O4 SRN 587870-90-4 CAPLUS
CN Heptanoic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

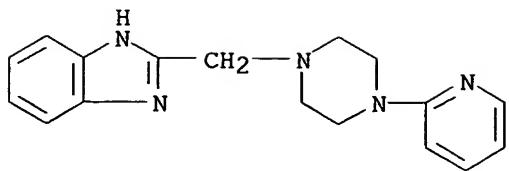
CRN 70006-24-5
CMF C17 H19 N5

CM 2

CRN 111-14-8
CMF C7 H14 O2Me-(CH₂)₅-CO₂HRN 587870-91-5 CAPLUS
CN Hexanoic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

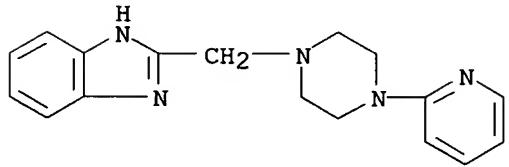
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 142-62-1
CMF C6 H12 O2Me—(CH₂)₄—CO₂HRN 587870-92-6 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

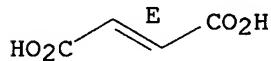
CM 1

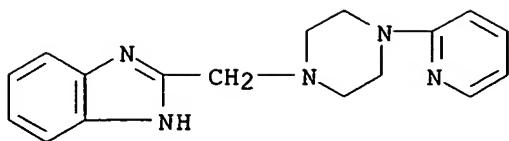
CRN 70006-24-5
CMF C17 H19 N5

CM 2

CRN 110-17-8
CMF C4 H4 O4

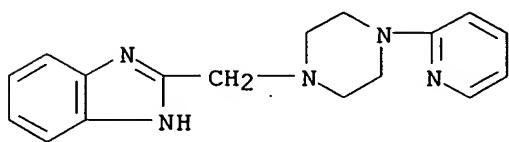
Double bond geometry as shown.

RN 587870-93-7 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)



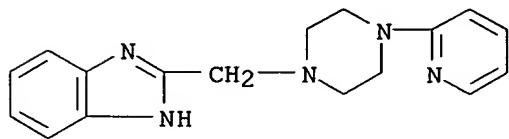
● HCl

RN 587870-94-8 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, dihydrochloride (9CI) (CA INDEX NAME)



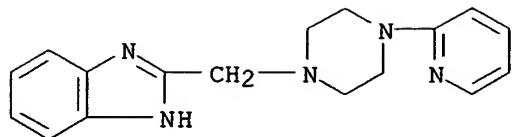
● 2 HCl

RN 587870-95-9 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monohydrobromide (9CI) (CA INDEX NAME)



● HBr

RN 587870-96-0 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monohydriodide (9CI) (CA INDEX NAME)



● HI

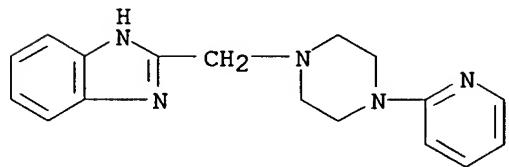
RN 587870-97-1 CAPLUS

CN Ethanesulfonic acid, 2-hydroxy-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5



CM 2

CRN 107-36-8

CMF C2 H6 O4 S

HO—CH₂—CH₂—SO₃H

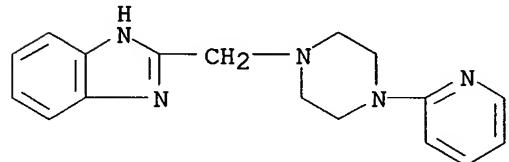
RN 587870-98-2 CAPLUS

CN Propanoic acid, 2-hydroxy-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

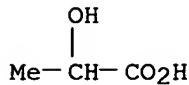
CRN 70006-24-5

CMF C17 H19 N5



CM 2

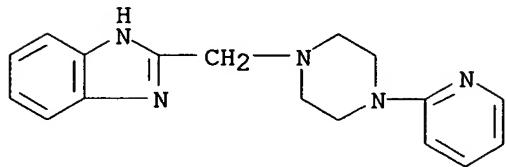
CRN 50-21-5
CMF C3 H6 O3



RN 587870-99-3 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, monomethanesulfonate (9CI) (CA INDEX NAME)

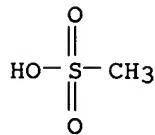
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

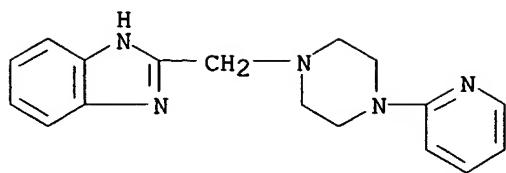
CRN 75-75-2
CMF C H4 O3 S



RN 587871-00-9 CAPLUS
CN 3-Pyridinecarboxylic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

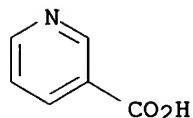
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 59-67-6

CMF C6 H5 N O2



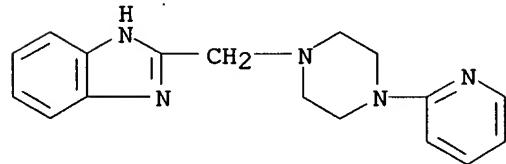
RN 587871-01-0 CAPLUS

CN 2-Naphthalenesulfonic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

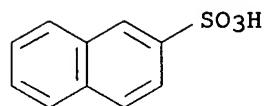
CMF C17 H19 N5



CM 2

CRN 120-18-3

CMF C10 H8 O3 S

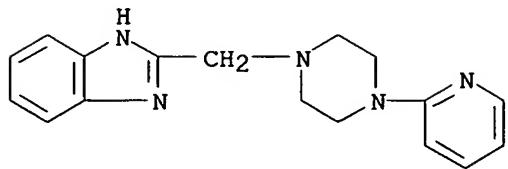


RN 587871-02-1 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

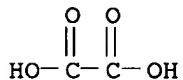
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 144-62-7
CMF C2 H2 O4

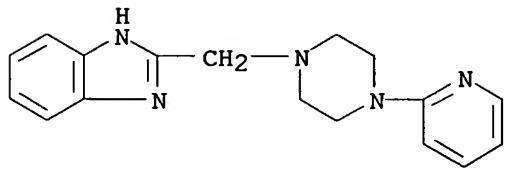


RN 587871-03-2 CAPLUS

CN 2-Naphthalene carboxylic acid, 4,4'-methylenebis[3-hydroxy-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

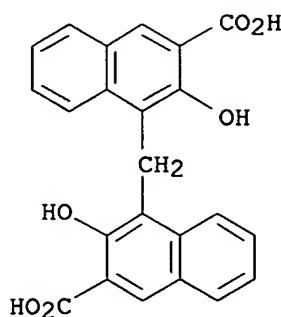
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 130-85-8
CMF C23 H16 O6



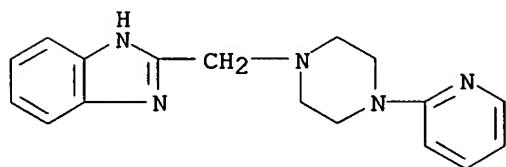
RN 587871-04-3 CAPLUS

CN Pectin, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5



CM 2

CRN 9000-69-5

CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

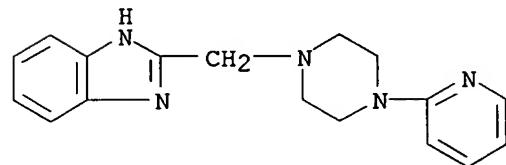
RN 587871-05-4 CAPLUS

CN Peroxymonosulfuric acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

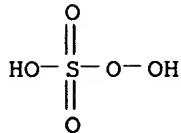
CM 1

CRN 70006-24-5

CMF C17 H19 N5

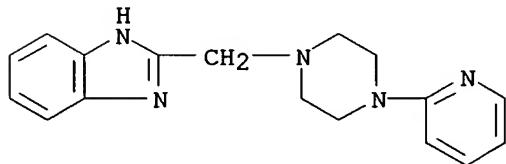


CM 2

CRN 7722-86-3
CMF H2 O5 S

RN 587871-06-5 CAPLUS
 CN Benzenepropanoic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5

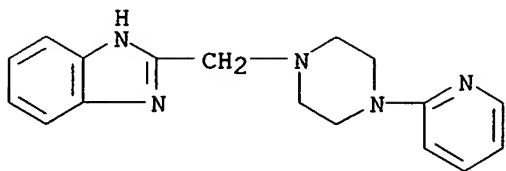
CM 2

CRN 501-52-0
CMF C9 H10 O2Ph-CH₂-CH₂-CO₂H

RN 587871-07-6 CAPLUS
 CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, compd. with 2,4,6-trinitrophenol (1:1) (9CI) (CA INDEX NAME)

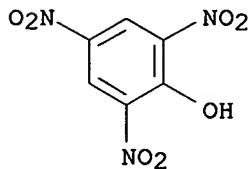
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 88-89-1
CMF C6 H3 N3 O7

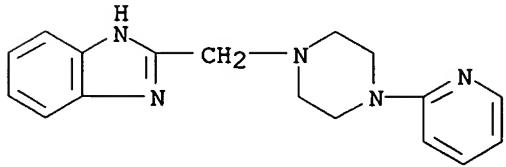


RN 587871-08-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

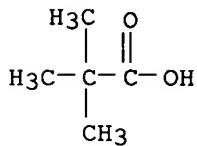
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 75-98-9
CMF C5 H10 O2



RN 587871-09-8 CAPLUS

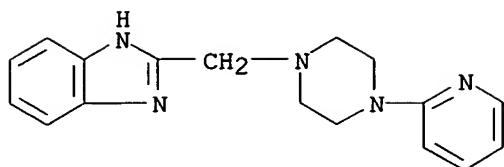
CN Propanoic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-

benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

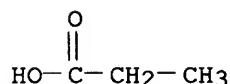
CMF C17 H19 N5



CM 2

CRN 79-09-4

CMF C3 H6 O2



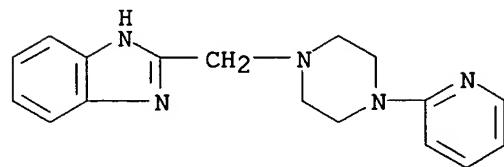
RN 587871-10-1 CAPLUS

CN Butanedioic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

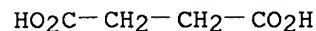
CMF C17 H19 N5



CM 2

CRN 110-15-6

CMF C4 H6 O4



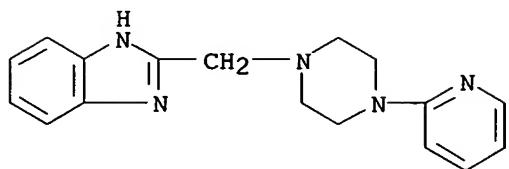
RN 587871-11-2 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, sulfate

(1:1) (9CI) (CA INDEX NAME)

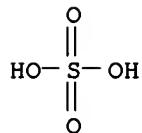
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

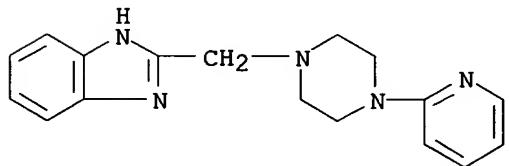
CRN 7664-93-9
CMF H2 O4 S



RN 587871-12-3 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, 2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

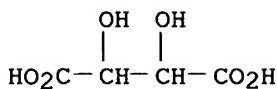
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 526-83-0
CMF C4 H6 O6



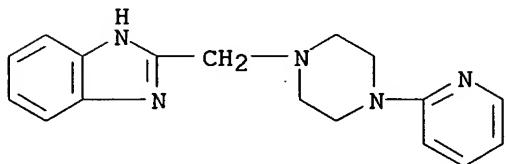
RN 587871-13-4 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

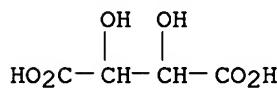
CMF C17 H19 N5



CM 2

CRN 526-83-0

CMF C4 H6 O6



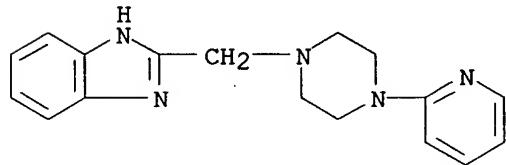
RN 587871-14-5 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

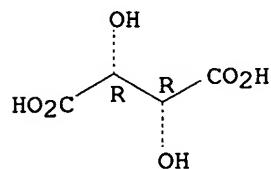


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



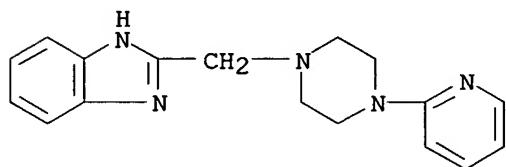
RN 587871-15-6 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
(2S,3S)-2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

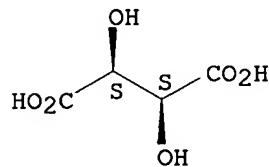


CM 2

CRN 147-71-7

CMF C4 H6 O6

Absolute stereochemistry.



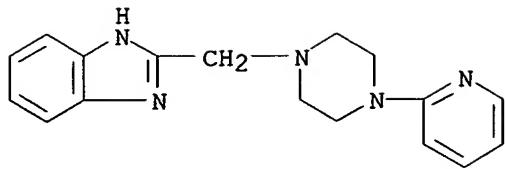
RN 587871-16-7 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
rel-(2R,3R)-2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

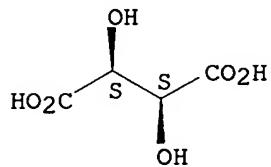
CMF C17 H19 N5



CM 2

CRN 133-37-9
CMF C4 H6 O6

Relative stereochemistry.

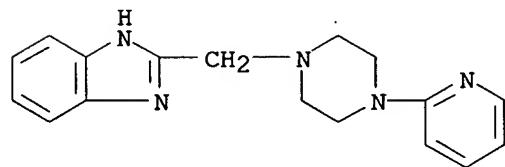


RN 587871-17-8 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-,
rel-(2R,3R)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

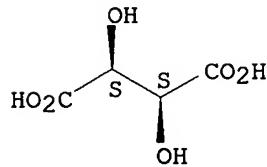
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 133-37-9
CMF C4 H6 O6

Relative stereochemistry.



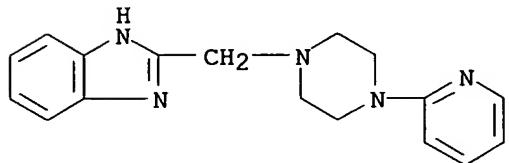
RN 587871-18-9 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-,
rel-(2R,3S)-2,3-dihydroxybutanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

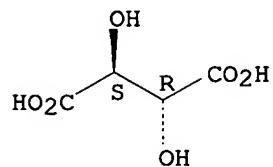


CM 2

CRN 147-73-9

CMF C4 H6 O6

Relative stereochemistry.



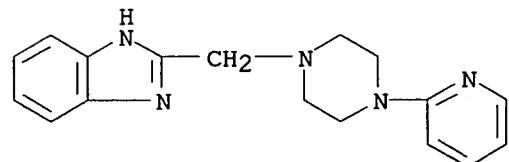
RN 587871-19-0 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-,
rel-(2R,3S)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

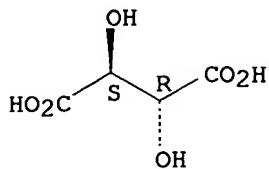


CM 2

CRN 147-73-9

CMF C4 H6 O6

Relative stereochemistry.



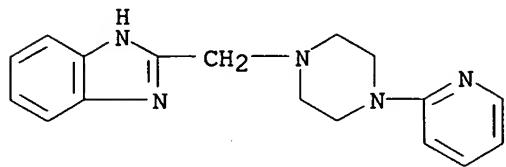
RN 587871-20-3 CAPLUS

CN Thiocyanic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5



CM 2

CRN 463-56-9

CMF C H N S

HS-C≡N

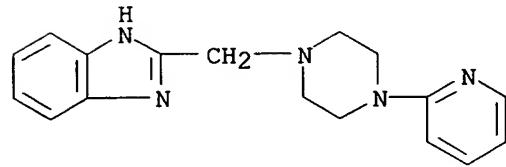
RN 587871-21-4 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, phosphate (1:1) (9CI) (CA INDEX NAME)

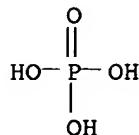
CM 1

CRN 70006-24-5

CMF C17 H19 N5

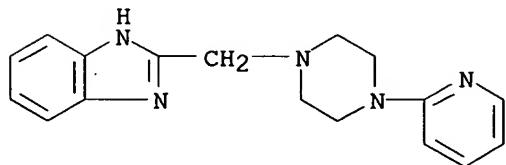


CM 2

CRN 7664-38-2
CMF H3 O4 P

RN 587871-22-5 CAPLUS
 CN L-Glutamic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

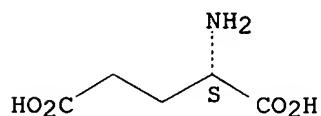
CM 1

CRN 70006-24-5
CMF C17 H19 N5

CM 2

CRN 56-86-0
CMF C5 H9 N O4

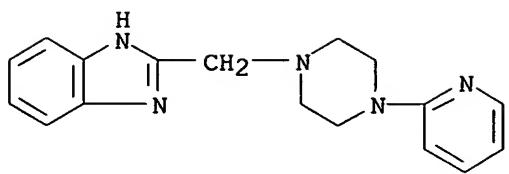
Absolute stereochemistry.



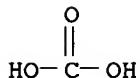
RN 587871-23-6 CAPLUS
 CN Carbonic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

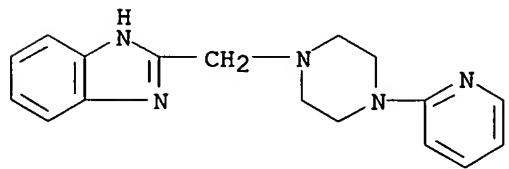
CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 463-79-6
CMF C H2 O3RN 587871-24-7 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2S,3S)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

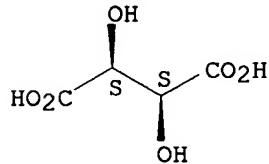
CM 1

CRN 70006-24-5
CMF C17 H19 N5

CM 2

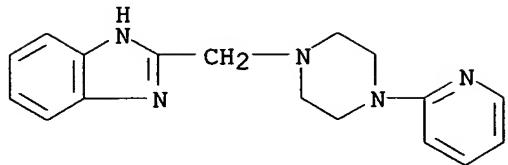
CRN 147-71-7
CMF C4 H6 O6

Absolute stereochemistry.

RN 587871-25-8 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, compd. with bromine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

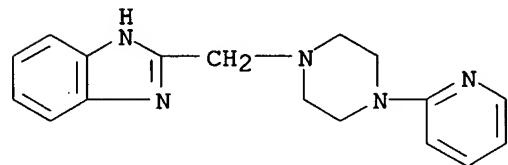
CRN 7726-95-6
CMF Br2

Br—Br

RN 587871-27-0 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

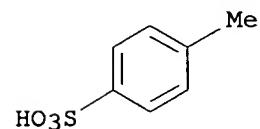
CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

CRN 104-15-4
CMF C7 H8 O3 S

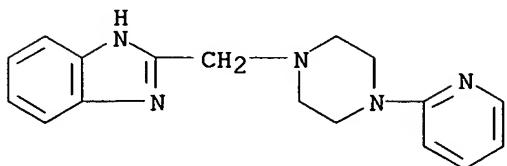


RN 587871-29-2 CAPLUS

CN Undecanoic acid, compd. with 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1H-benzimidazole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5
CMF C17 H19 N5



CM 2

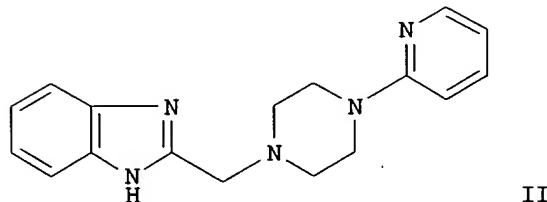
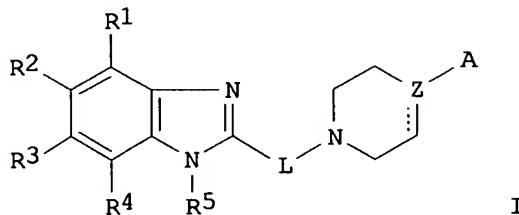
CRN 112-37-8
CMF C11 H22 O2

HO₂C-(CH₂)₉-Me

L4 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:23532 CAPLUS
 DN 138:89812
 TI Preparation of heteroalkyl-substituted benzimidazoles useful in treating sexual dysfunction
 IN Cowart, Marlon D.; Bhatia, Pramila A.; Daanen, Jerome F.; Stewart, Andrew O.; Patel, Meena V.; Kolasa, Teodozyj; Brioni, Jorge D.
 PA USA
 SO U.S. Pat. Appl. Publ., 44 pp., Cont.-in-part of U.S. Ser. No. 803,537, abandoned.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003008878	A1	20030109	US 2001-874484	20010605
	US 2002169166	A1	20021114	US 2001-17939	20011214
	CA 2439943	AA	20021107	CA 2002-2439943	20020306
	WO 2002088093	A1	20021107	WO 2002-US7791	20020306
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EP 1373220	A1	20040102	EP 2002-731130	20020306	

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NO 2003003959	A	20031110	NO 2003-3959	20030908
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OS MARPAT 138:89812				
GI				



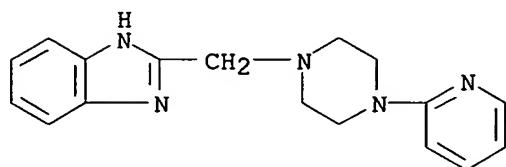
AB Title compds. I [A = (hetero)aryl; L = CH₂, CH₂CH₂, etc.; R₁₋₄ = H, alkoxy, alkenyl, alkyl, alkylsulfinyl, alkylsulfonyl, etc.; R₅ = H, alkoxy carbonyl, alkyl, etc.; Z = N, C(H)] are prepd. For instance, 1-(2-pyridyl)piperazine is alkylated with 2-chloromethylbenzimidazole (DMF, Et₃N, 16 h) to give II. II induced statistically significant penile erections in rats after s.c. administration for doses of 0.01 .mu.mol/kg to 0.10 .mu.mol/kg. I are useful for the treatment of sexual dysfunction.

IT **70006-24-5P**, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **70006-25-6P**, 2-[(4-(1,3-Thiazol-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-17-9P** **474417-18-0P**, 2-[(4-Pyrimidin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-20-4P**, 2-[(4-(1H-Benzimidazol-2-yl)methyl)piperazin-1-yl]nicotinonitrile **474417-21-5P**, 5,7-Dibromo-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-22-6P**, 5-Fluoro-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-24-8P**, Isobutyl 2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate **474417-25-9P**, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole **474417-26-0P**, N,N-Dimethyl-2-[(4-(pyridin-2-

yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide
474417-48-6P, 6-[4-((1H-Benzimidazol-2-yl)methyl)piperazin-1-yl]pyridin-3-ol **474417-51-1P**, 2-[[4-(3-Methylpyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. of heteroalkyl-substituted benzimidazoles as dopamine agonists useful in treating sexual dysfunction)

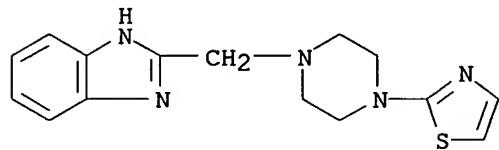
RN 70006-24-5 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 70006-25-6 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-thiazolyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



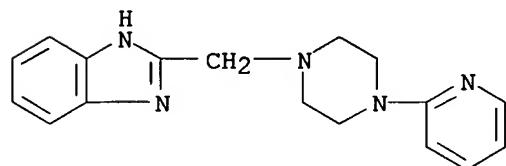
RN 474417-17-9 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

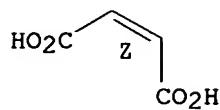


CM 2

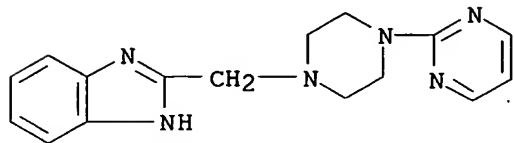
CRN 110-16-7

CMF C4 H4 O4

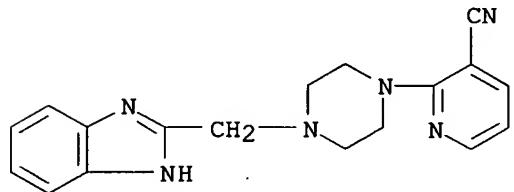
Double bond geometry as shown.



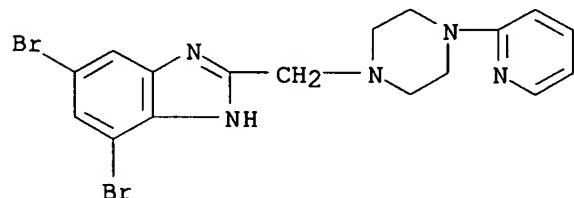
RN 474417-18-0 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyrimidinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



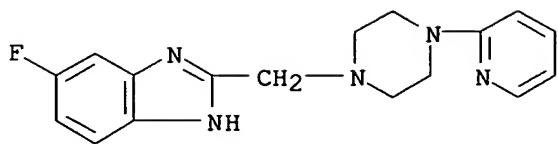
RN 474417-20-4 CAPLUS
CN 3-Pyridinecarbonitrile, 2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



RN 474417-21-5 CAPLUS
CN 1H-Benzimidazole, 4,6-dibromo-2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)

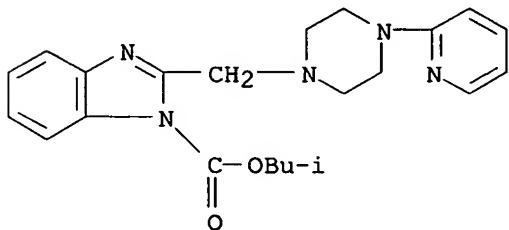


RN 474417-22-6 CAPLUS
CN 1H-Benzimidazole, 5-fluoro-2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



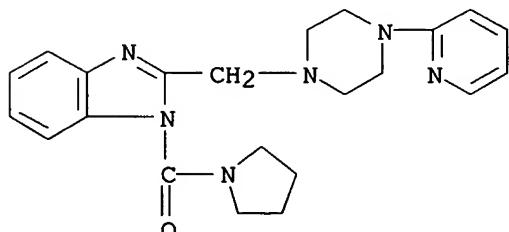
RN 474417-24-8 CAPLUS

CN 1H-Benzimidazole-1-carboxylic acid, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, 2-methylpropyl ester (9CI) (CA INDEX NAME)



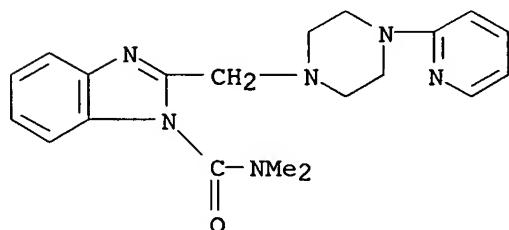
RN 474417-25-9 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1-(1-pyrrolidinylcarbonyl)- (9CI) (CA INDEX NAME)



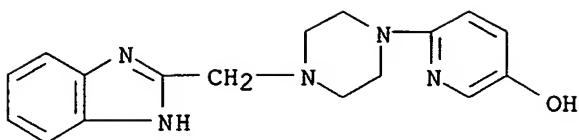
RN 474417-26-0 CAPLUS

CN 1H-Benzimidazole-1-carboxamide, N,N-dimethyl-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



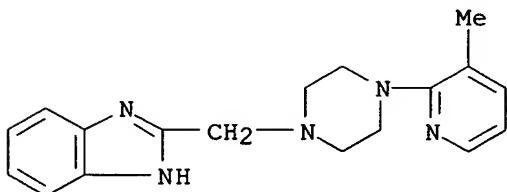
RN 474417-48-6 CAPLUS

CN 3-Pyridinol, 6-[(4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl)- (9CI) (CA INDEX NAME)



RN 474417-51-1 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-methyl-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:888718 CAPLUS

DN 137:384842

TI Benzimidazole compounds and antiviral uses thereof

IN Lackey, John William; Kinder, Daniel S.; Tvermoes, Nicolai A.

PA Trimeris, Inc., USA

SO PCT Int. Appl., 143 pp.

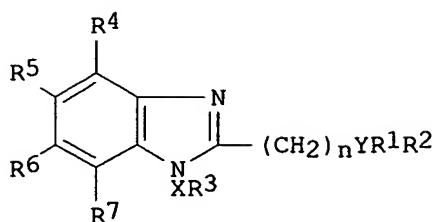
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002092575	A1	20021121	WO 2002-US14598	20020510
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
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	US 2003119754	A1	20030626	US 2002-141839	20020509
	US 7030150	B2	20060418		
PRAI	US 2001-290038P	P	20010511		
OS	MARPAT 137:384842				
GI					



AB Title compds. I [R1, R2 = H, (un)substituted alkyl, cycloalkyl, heterocyclic, aryl, heteroaryl; R3 = H, halo, (un)substituted alkyl, Oh, alkoxy, aryl, heterocyclic, heteroaryl; R4-R7 = H, halo, (un)substituted alkyl, OH, alkoxy, aryl, heterocyclic, heteroaryl; X = bond, (un)substituted alkylene, C:N, CO, P, S; Y = N, P, O, S; when Y = O, S, R2 is absent; n = 0-4] were prepd. for use as virucides that inhibit membrane fusion assocd. events such as viral transmission, reduce viral load or otherwise treat viral infections, particularly that caused by Respiratory Syncytial Virus. Thus, I [R1 = cyclohexyl, R2 = CHMe2, Y = N, X = CH2, R3 = 2-quinolinyl, R4-R7 = H] had IC50 of 5.16 .mu.g/mL.

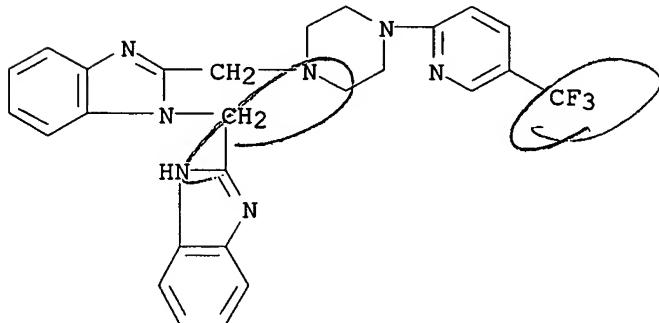
IT **475648-10-3P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of benzimidazole derivs. as virucides for treating Respiratory Syncytial Virus infections)

RN 475648-10-3 CAPLUS

CN 1H-Benzimidazole, 1-(1H-benzimidazol-2-ylmethyl)-2-[(4-[5-(trifluoromethyl)-2-pyridinyl]-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



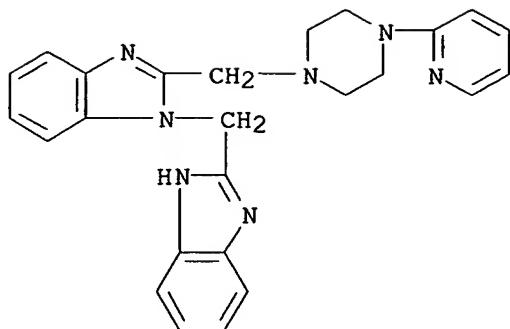
IT **475648-98-7P**

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of benzimidazole derivs. as virucides for treating Respiratory Syncytial Virus infections)

RN 475648-98-7 CAPLUS

CN 1H-Benzimidazole, 1-(1H-benzimidazol-2-ylmethyl)-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

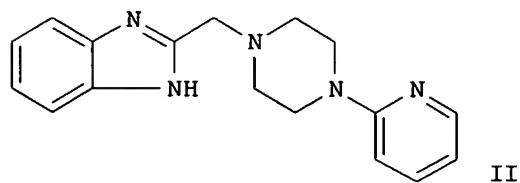
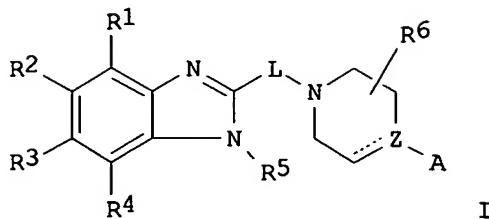
L4 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:869583 CAPLUS
DN 137:353027
TI Preparation of 2-(piperazinylmethyl)-1H-benzimidazoles and related compounds that are useful in treating sexual dysfunction
IN Cowart, Marlon D.; Bhatia, Pramila A.; Daanen, Jerome F.; Stewart, Andrew O.; Patel, Meena V.; Kolasa, Teodozyj; Brioni, Jorge D.; Rohde, Jeffrey
PA Abbott Laboratories, USA
SO U.S. Pat. Appl. Publ., 53 pp.
CODEN: USXXCO
DT Patent
LA English

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002169167	A1	20021114	US 2002-94265	20020308
US 7022728	B2	20060404		
US 2003162790	A1	20030828	US 2002-236812	20020906
US 6960589	B2	20051101		
CA 2478028	AA	20030918	CA 2003-2478028	20030304
WO 2003076431	A1	20030918	WO 2003-US6406	20030304
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003219981	A1	20030922	AU 2003-219981	20030304
BR 2003005708	A	20040928	BR 2003-5708	20030304
EP 1483258	A1	20041208	EP 2003-716268	20030304
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006508019	T2	20060309	JP 2003-574648	20030304
US 2004110766	A1	20040610	US 2003-699465	20031031
PRAI US 2001-274805P	P	20010309		
US 2001-296078P	P	20010605		
US 2001-340452P	P	20011214		

parent

US 2002-94265	A2	20020308
US 2002-236812	A	20020906
WO 2003-US6406	W	20030304
OS MARPAT 137:353027		
GI		



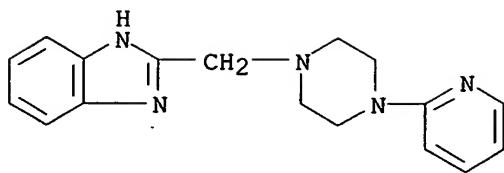
AB Title compds. (I) [wherein A = (un)substituted Ph, pyridinyl, pyrimidinyl, thienyl, pyrrolyl, furyl, imidazolyl, pyrazolyl, (is)oxazolyl, (iso)thiazolyl, triazolyl, tetrazolyl, etc.; L = CH₂, CH₂CH₂, CH₂CH₂CH₂; R₁-R₄ = independently H, alkoxy(carbonyl), alkenyl, (halo)alkyl, alkylthio, alkylsulfinyl, alkylsulfonyl, alkynyl, alkylcarbonyl(oxy), CO₂H, CN, CHO, halo(alkoxy), OH, hydroxyalkyl, SH, NO₂, or (un)substituted amino or carbamoyl; R₅ = H, alkoxy carbonyl, alkyl, (cyclo)alkylcarbonyl, arylcarbonyl, heterocyclcarbonyl, or (un)substituted carbamoyl; R₆ = H or alkyl; Z = N, C, or CH; or pharmaceutically acceptable salt, ester, amide, or prodrug thereof] were prep'd. as dopamine agonists (no data) for the treatment of sexual dysfunction. For example, 2-chloromethylbenzimidazole and TEA were added to 1-(2-pyridyl)piperazine in DMF and the soln. stirred at 20.degree. for 16 h to give 2-[(4-pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole (II) in 72% yield. The latter induced penile erection in Wistar rats with an incidence of 83% at a dose of 0.03 .mu.mol/kg without inducing emesis.

IT 70006-24-5P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (dopamine agonist; prep'n. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 70006-24-5 CAPLUS

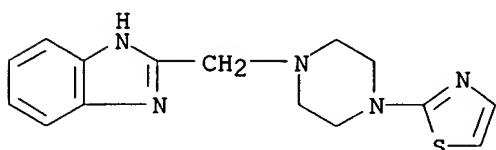
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



IT 70006-25-6P, 2-[(4-(1,3-Thiazol-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-17-9P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole maleate (1:1) 474417-18-0P, 2-[(4-(Pyrimidin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-19-1P, 2-[(4-(6-Methylpyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-20-4P, 2-[4-[(1H-Benzimidazol-2-yl)methyl]piperazin-1-yl]nicotinonitrile 474417-21-5P, 5,7-Dibromo-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-22-6P, 5-Fluoro-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-24-8P, Isobutyl 2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate 474417-25-9P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole 474417-26-0P, N,N-Dimethyl-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide 474417-39-5P, 2-[(2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-41-9P, 2-[(2S)-2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-43-1P, 2-[(2R)-2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-45-3P, N-[2-[(4-[(1H-Benzimidazol-2-yl)methyl]piperazin-1-yl)pyridin-3-yl]methanesulfonamide 474417-47-5P, 2-[(4-(3-Fluoropyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-48-6P, 6-[(4-[(1H-Benzimidazol-2-yl)methyl]piperazin-1-yl)pyridin-3-ol 474417-51-1P, 2-[(4-(3-Methylpyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-52-2P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate)
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dopamine agonist; prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 70006-25-6 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-thiazolyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

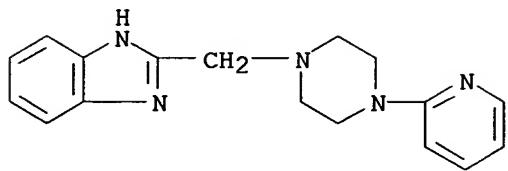


RN 474417-17-9 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

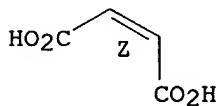
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CMF C17 H19 N5



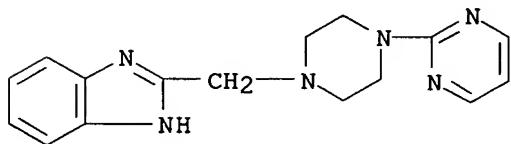
CM 2

CRN 110-16-7
CMF C4 H4 O4

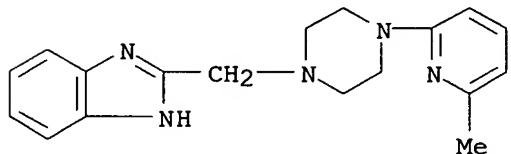
Double bond geometry as shown.



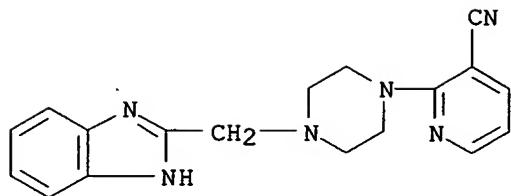
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CN 1H-Benzimidazole, 2-[(4-(2-pyrimidinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



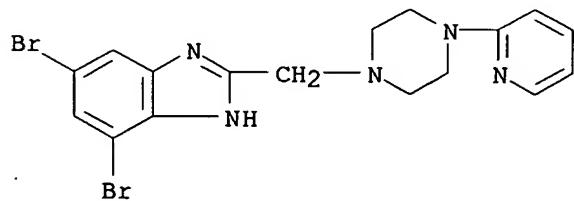
RN 474417-19-1 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(6-methyl-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



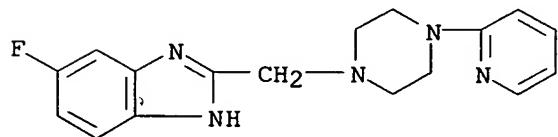
RN 474417-20-4 CAPLUS
CN 3-Pyridinecarbonitrile, 2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



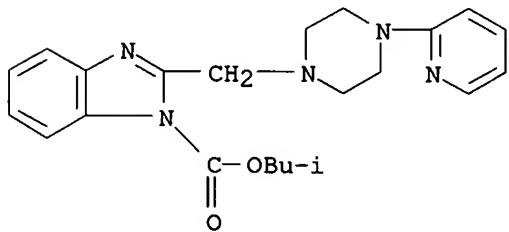
RN 474417-21-5 CAPLUS
CN 1H-Benzimidazole, 4,6-dibromo-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



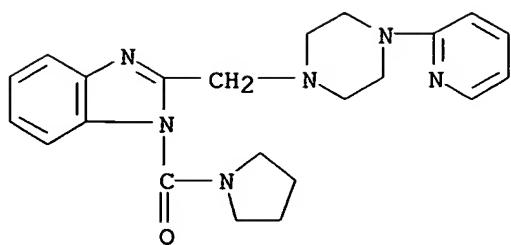
RN 474417-22-6 CAPLUS
CN 1H-Benzimidazole, 5-fluoro-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-24-8 CAPLUS
CN 1H-Benzimidazole-1-carboxylic acid, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-2-methylpropyl ester (9CI) (CA INDEX NAME)

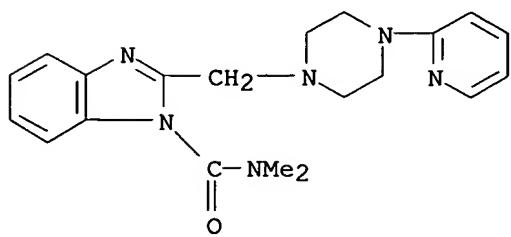


RN 474417-25-9 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1-(1-pyrrolidinylcarbonyl)- (9CI) (CA INDEX NAME)



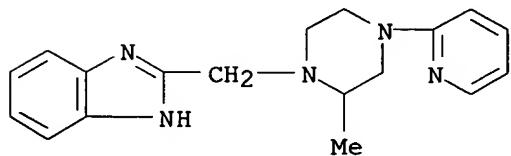
RN 474417-26-0 CAPLUS

CN 1H-Benzimidazole-1-carboxamide, N,N-dimethyl-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-39-5 CAPLUS

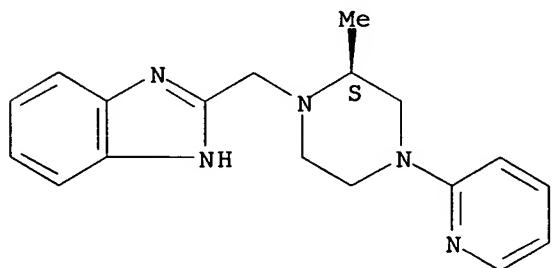
CN 1H-Benzimidazole, 2-[(2-methyl-4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-41-9 CAPLUS

CN 1H-Benzimidazole, 2-[(2S)-2-methyl-4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

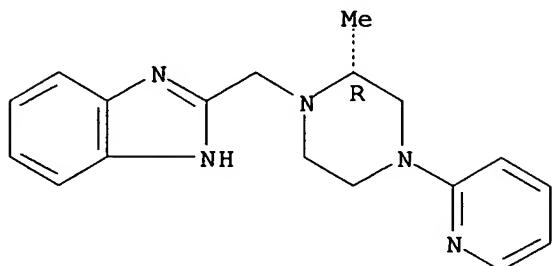
Absolute stereochemistry.



RN 474417-43-1 CAPLUS

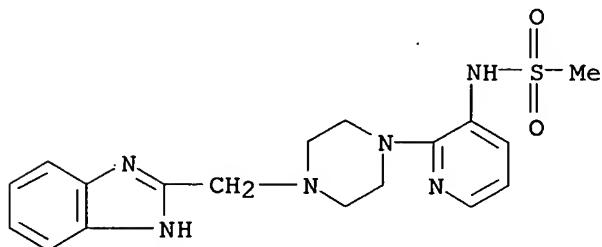
CN 1H-Benzimidazole, 2-[(2R)-2-methyl-4-(2-pyridinyl)-1-piperazinyl]methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



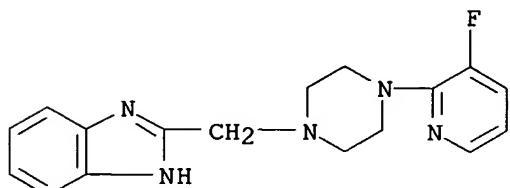
RN 474417-45-3 CAPLUS

CN Methanesulfonamide, N-[2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]-3-pyridinyl]- (9CI) (CA INDEX NAME)



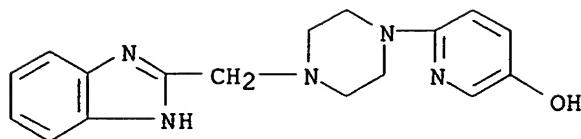
RN 474417-47-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-fluoro-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



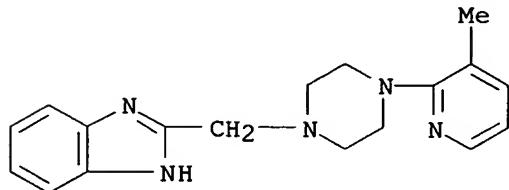
RN 474417-48-6 CAPLUS

CN 3-Pyridinol, 6-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



RN 474417-51-1 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-methyl-2-pyridinyl)-1-piperazinyl)methyl]-, (9CI) (CA INDEX NAME)



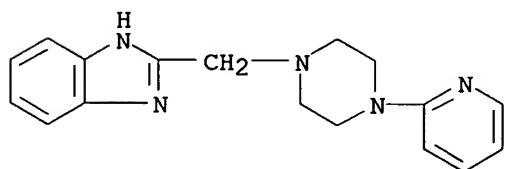
RN 474417-52-2 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2R,3R)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

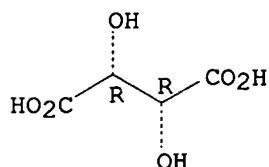


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.

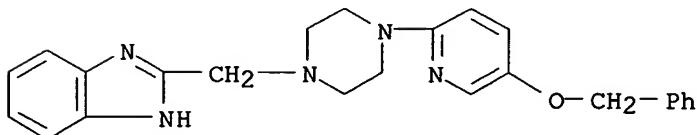


IT 474417-50-0P, 2-[(4-[5-(Benzyl)pyridin-2-yl]piperazin-1-yl)methyl]-1H-benzimidazole

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate; prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 474417-50-0 CAPLUS

CN 1H-Benzimidazole, 2-[(4-[5-(phenylmethoxy)-2-pyridinyl]-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:869582 CAPLUS

Some IE

DN 137:353026

TI Preparation of 2-(piperazinylmethyl)-1H-benzimidazoles and related compounds that are useful in treating sexual dysfunction

IN Cowart, Marlon D.; Bhatia, Pramila A.; Daanen, Jerome F.; Stewart, Andrew O.; Patel, Meena V.; Kolasa, Teodozyj; Brioni, Jorge D.; Rohde, Jeffrey

PA USA

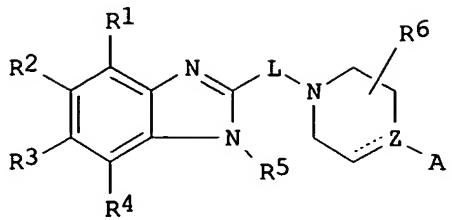
SO U.S. Pat. Appl. Publ., 53 pp., Cont.-in-part of U.S. Ser. No. 874,484.
 CODEN: USXXCO

DT Patent

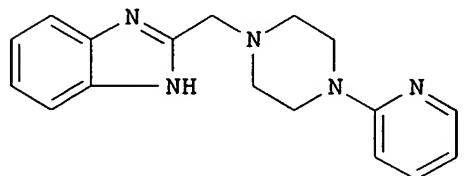
LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002169166	A1	20021114	US 2001-17939	20011214
	US 2003008878	A1	20030109	US 2001-874484	20010605
	CA 2439943	AA	20021107	CA 2002-2439943	20020306
	WO 2002088093	A1	20021107	WO 2002-US7791	20020306
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1373220	A1	20040102	EP 2002-731130	20020306
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	CN 1516693	A	20040728	CN 2002-809382	20020306
	JP 2005507370	T2	20050317	JP 2002-585395	20020306
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	NO 2003003959	A	20031110	NO 2003-3959	20030908
	BG 108230	A	20050430	BG 2003-108230	20031003
PRAI	US 2001-803537	B2	20010309		
	US 2001-874484	A2	20010605		
	US 2001-17939	A	20011214		
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I



II

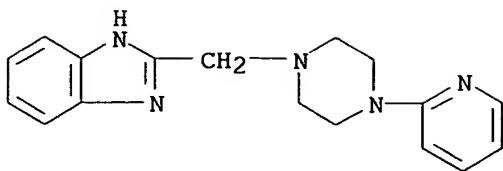
AB Title compds. (I) [wherein A = (un)substituted Ph, pyridinyl, pyrimidinyl, thienyl, pyrrolyl, furyl, imidazolyl, pyrazolyl, (is)oxazolyl, (iso)thiazolyl, triazolyl, tetrazolyl, etc.; L = CH₂, CH₂CH₂, CH₂CH₂CH₂, or CH₂CH₂CH₂CH₂; R₁-R₄ = independently H, alkoxy(carbonyl), alkenyl, (halo)alkyl, alkylthio, alkylsulfinyl, alkylsulfonyl, alkynyl, alkylcarbonyl(oxy), CO₂H, CN, CHO, halo(alkoxy), OH, hydroxyalkyl, SH, NO₂, or (un)substituted amino or carbamoyl; R₅ = H, alkoxy carbonyl, alkyl, (cyclo)alkylcarbonyl, arylcarbonyl, heterocyclylcarbonyl, or (un)substituted carbamoyl; R₆ = H or alkyl; Z = N, C, or CH; or pharmaceutically acceptable salt, ester, amide, or prodrug thereof] were prep'd. as dopamine agonists (no data) for the treatment of sexual dysfunction. For example, 2-chloromethylbenzimidazole and TEA were added to 1-(2-pyridyl)piperazine in DMF and the soln. stirred at 20.degree. for 16 h to give 2-[(4-pyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole (II) in 72% yield. The latter induced penile erection in Wistar rats with an incidence of 83% at a dose of 0.03 .mu.mol/kg without inducing emesis.

IT 70006-24-5P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (dopamine agonist; prepn. of (heterocyclylalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 70006-24-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



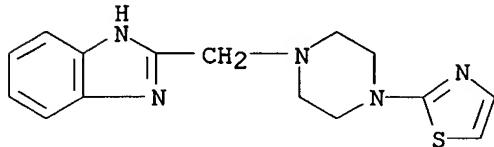
IT 70006-25-6P, 2-[(4-(1,3-Thiazol-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-17-9P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole maleate (1:1) 474417-18-0P, 2-[(4-(Pyrimidin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-19-1P, 2-[(4-(6-Methylpyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-20-4P, 2-[(4-(1H-Benzimidazol-2-yl)methyl)piperazin-1-yl]nicotinonitrile 474417-21-5P, 5,7-Dibromo-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-22-6P, 5-Fluoro-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-24-8P, Isobutyl 2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate 474417-25-9P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole 474417-26-0P, N,N-Dimethyl-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide 474417-39-5P, 2-[(2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-41-9P, 2-[(2S)-2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-43-1P, 2-[(2R)-2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-45-3P, N-[2-[(4-(1H-Benzimidazol-2-yl)methyl)piperazin-1-yl]pyridin-3-yl]methanesulfonamide 474417-47-5P, 2-[(4-(3-Fluoropyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-48-6P, 6-[(4-(1H-Benzimidazol-2-yl)methyl)piperazin-1-yl]pyridin-3-ol 474417-51-1P, 2-[(4-(3-Methylpyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole 474417-52-2P, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate)

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dopamine agonist; prepn. of (heterocyclalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 70006-25-6 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-thiazolyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

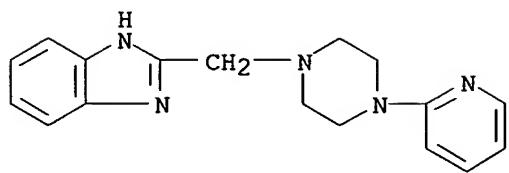


RN 474417-17-9 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

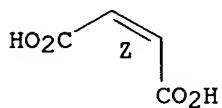
CRN 70006-24-5
CMF C17 H19 N5



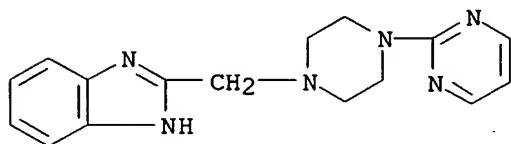
CM 2

CRN 110-16-7
CMF C4 H4 O4

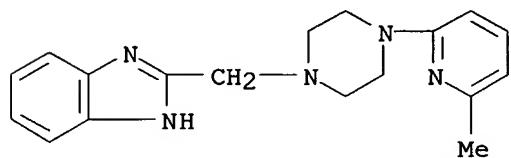
Double bond geometry as shown.



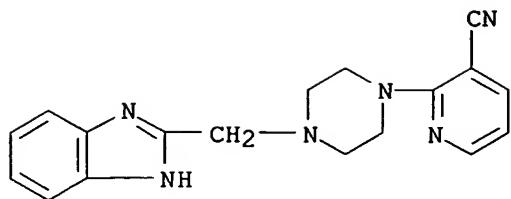
RN 474417-18-0 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(2-pyrimidinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



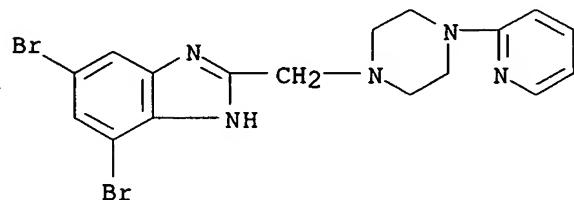
RN 474417-19-1 CAPLUS
CN 1H-Benzimidazole, 2-[[4-(6-methyl-2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



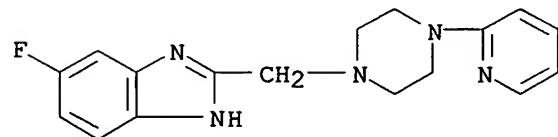
RN 474417-20-4 CAPLUS
CN 3-Pyridinecarbonitrile, 2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



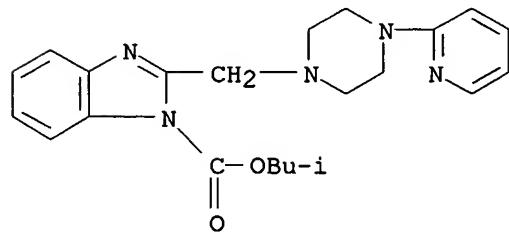
RN 474417-21-5 CAPLUS
CN 1H-Benzimidazole, 4,6-dibromo-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



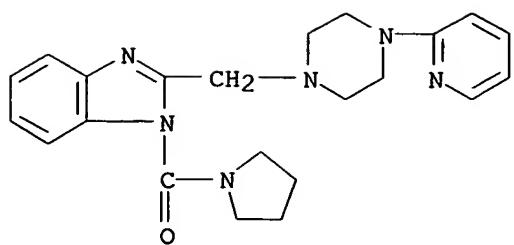
RN 474417-22-6 CAPLUS
CN 1H-Benzimidazole, 5-fluoro-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-24-8 CAPLUS
CN 1H-Benzimidazole-1-carboxylic acid, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, 2-methylpropyl ester (9CI) (CA INDEX NAME)

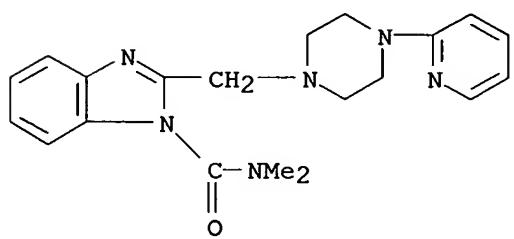


RN 474417-25-9 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1-(1-pyrrolidinylcarbonyl)- (9CI) (CA INDEX NAME)



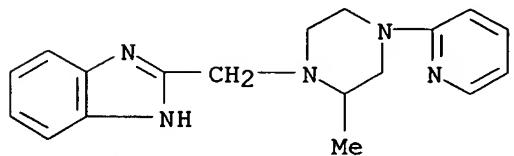
RN 474417-26-0 CAPLUS

CN 1H-Benzimidazole-1-carboxamide, N,N-dimethyl-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-39-5 CAPLUS

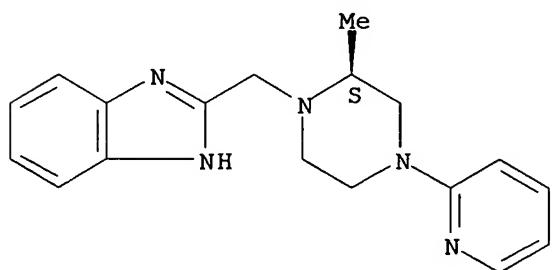
CN 1H-Benzimidazole, 2-[(2-methyl-4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-41-9 CAPLUS

CN 1H-Benzimidazole, 2-[(2S)-2-methyl-4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

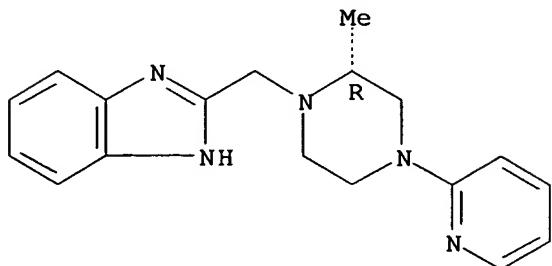
Absolute stereochemistry.



RN 474417-43-1 CAPLUS

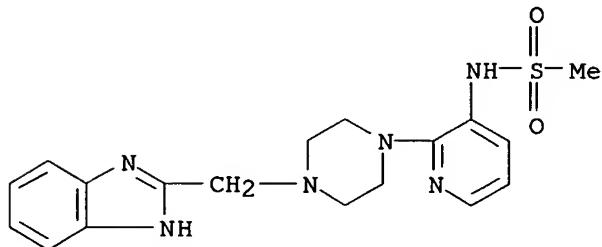
CN 1H-Benzimidazole, 2-[(2R)-2-methyl-4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



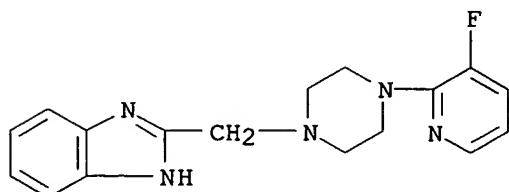
RN 474417-45-3 CAPLUS

CN Methanesulfonamide, N-[2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]-3-pyridinyl]- (9CI) (CA INDEX NAME)



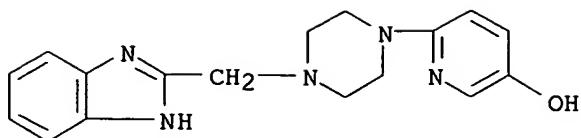
RN 474417-47-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-fluoro-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



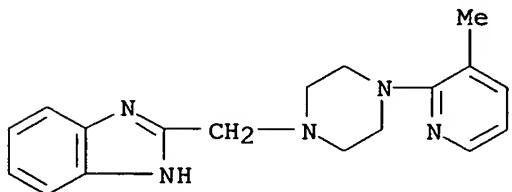
RN 474417-48-6 CAPLUS

CN 3-Pyridinol, 6-[(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



RN 474417-51-1 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(3-methyl-2-pyridinyl)-1-piperazinyl)methyl]-, (9CI) (CA INDEX NAME)



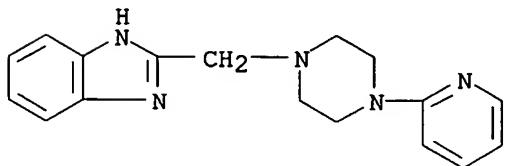
RN 474417-52-2 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2R,3R)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

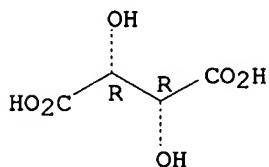


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.

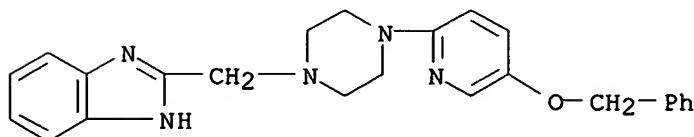


IT 474417-50-0P, 2-[(4-(5-(Benzyl)pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate; prepn. of (heterocyclylalkyl)benzimidazoles from heterocycles and (haloalkyl)benzimidazoles for treatment of sexual dysfunction)

RN 474417-50-0 CAPLUS

CN 1H-Benzimidazole, 2-[[4-[5-(phenylmethoxy)-2-pyridinyl]-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:849600 CAPLUS

DN 137:353023

TI Preparation of 2-heterocycloalkyl-benzimidazole derivatives for treating sexual dysfunction

IN Cowart, Marlon D.; Bhatia, Pramila A.; Daanen, Jerome F.; Stewart, Andrew O.; Kolasa, Teodozyj; Rohde, Jeffrey J.; Patel, Meena V.; Brioni, Jorge D.

PA Abbott Laboratories, USA

SO PCT Int. Appl., 115 pp.

Same I E

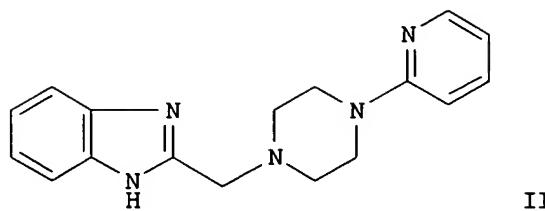
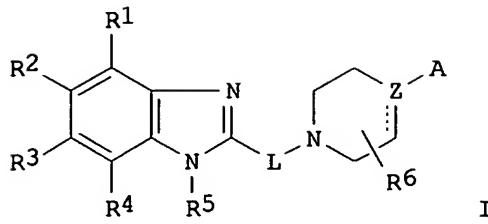
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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	US 2002169166	A1	20021114	US 2001-17939	20011214
	CA 2439943	AA	20021107	CA 2002-2439943	20020306
	EP 1373220	A1	20040102	EP 2002-731130	20020306
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	JP 2005507370	T2	20050317	JP 2002-585395	20020306
	BR 2002005812	A	20050503	BR 2002-5812	20020306
	NO 2003003959	A	20031110	NO 2003-3959	20030908
PRAI	US 2001-803537	A	20010309		
	US 2001-874484	A	20010605		
	US 2001-17939	A	20011214		
	WO 2002-US7791	W	20020306		
OS	MARPAT 137:353023				
GI					



AB The present invention relates to the use of I [A = Ph, pyridyl, pyrimidinyl, thiophenyl, etc.; X = NH, O, S; L = (CH₂)₁₋₄; R₁₋₄ = H, alkoxy, alkenyl, alkyl, alkylsulfinyl, etc.; R₅ = H, alkoxycarbonyl, alkyl, alkylcarbonyl, arylcarbonyl, etc.; R₆ = H, alkyl; Z = N, C (if dotted line is a bond), CH (if dotted line is absent)] for the treatment of sexual dysfunction. For instance, 1-(2-pyridyl)piperazine was reacted with 2-chloromethylbenzimidazole to afford II which was isolated and converted to the maleate salt. II at s.c. doses of 0.01 - 0.10 .mu.mol/kg induced statistically significant penile erections in rats compared to vehicle (L-ascorbic acid in saline).

IT **70006-24-5P**, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **70006-25-6P**, 2-[(4-(1,3-Thiazol-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-17-9P**, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole maleate **474417-18-0P**, 2-[(4-Pyrimidin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-19-1P**, 2-[(4-(6-Methylpyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-20-4P**, 2-[4-(1H-Benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile **474417-21-5P**, 5,7-Dibromo-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-22-6P**, 5-Fluoro-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-24-8P**, Isobutyl 2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate **474417-25-9P**, 2-[(4-(Pyridin-2-yl)piperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole **474417-26-0P**, N,N-Dimethyl-2-[(4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide **474417-39-5P**, 2-[(2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-41-9P**, (S)-2-[(2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-43-1P**, (R)-2-[(2-Methyl-4-(pyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole **474417-45-3P**, N-[2-[4-(1H-Benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl]methanesulfonamide **474417-47-5P**, 2-[(4-(3-Fluoropyridin-2-yl)piperazin-1-yl)methyl]-1H-benzimidazole

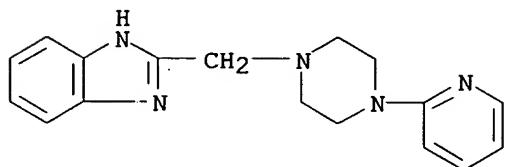
474417-48-6P, 6-[4-(1H-Benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol **474417-51-1P**, 2-[[4-(3-Methylpyridin-2-yl)piperazin-1-yl]methyl]-1H-benzimidazole **474417-52-2P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 2-piperazino/piperidino-alkyl-benzimidazole derivs. for treating sexual dysfunction)

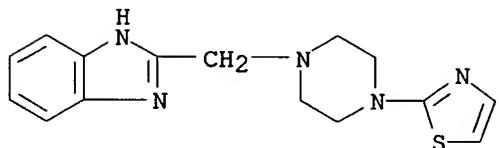
RN 70006-24-5 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



RN 70006-25-6 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-thiazolyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



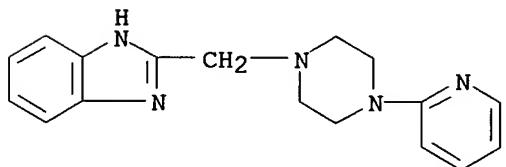
RN 474417-17-9 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70006-24-5

CMF C17 H19 N5

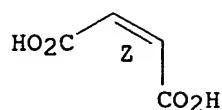


CM 2

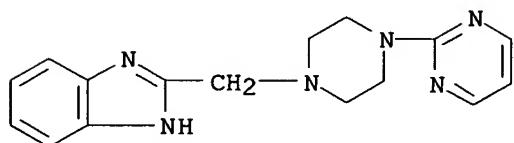
CRN 110-16-7

CMF C4 H4 O4

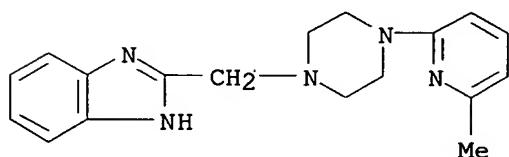
Double bond geometry as shown.



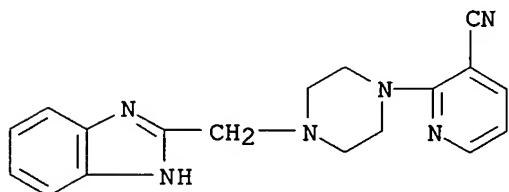
RN 474417-18-0 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyrimidinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



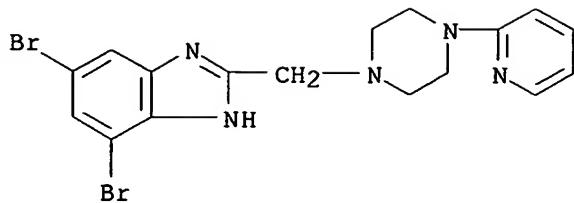
RN 474417-19-1 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(6-methyl-2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



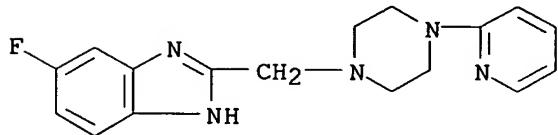
RN 474417-20-4 CAPLUS
CN 3-Pyridinecarbonitrile, 2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



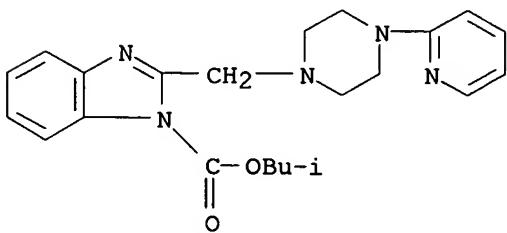
RN 474417-21-5 CAPLUS
CN 1H-Benzimidazole, 4,6-dibromo-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



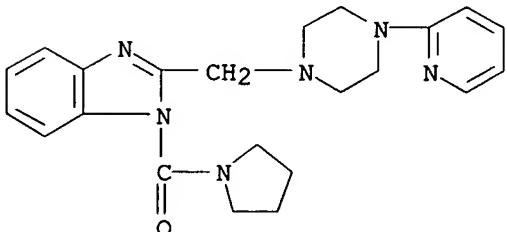
RN 474417-22-6 CAPLUS
CN 1H-Benzimidazole, 5-fluoro-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



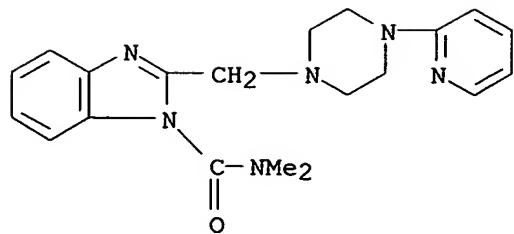
RN 474417-24-8 CAPLUS
CN 1H-Benzimidazole-1-carboxylic acid, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 474417-25-9 CAPLUS
CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-1-(1-pyrrolidinylcarbonyl)- (9CI) (CA INDEX NAME)

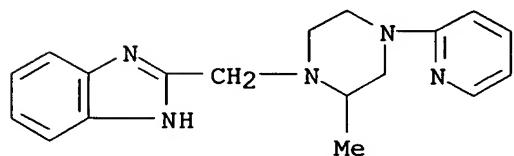


RN 474417-26-0 CAPLUS
CN 1H-Benzimidazole-1-carboxamide, N,N-dimethyl-2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-39-5 CAPLUS

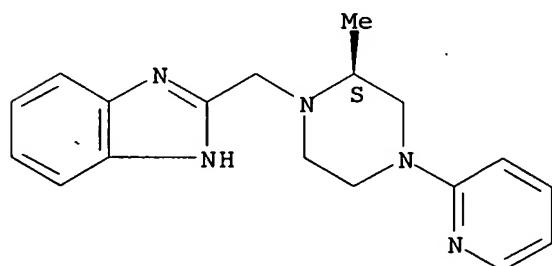
CN 1H-Benzimidazole, 2-[(2-methyl-4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



RN 474417-41-9 CAPLUS

CN 1H-Benzimidazole, 2-[(2S)-2-methyl-4-(2-pyridinyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

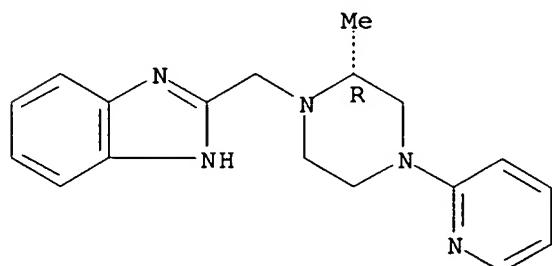
Absolute stereochemistry.



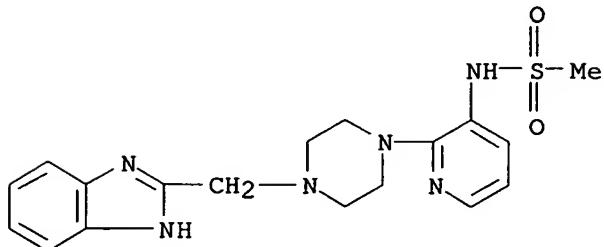
RN 474417-43-1 CAPLUS

CN 1H-Benzimidazole, 2-[(2R)-2-methyl-4-(2-pyridinyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

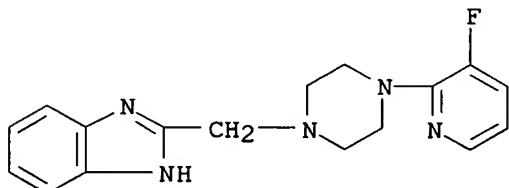
Absolute stereochemistry.



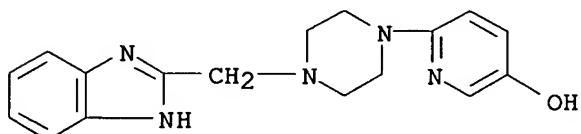
RN 474417-45-3 CAPLUS
CN Methanesulfonamide, N-[2-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]-3-pyridinyl]- (9CI) (CA INDEX NAME)



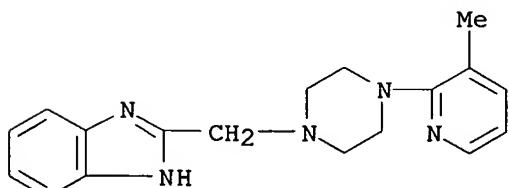
RN 474417-47-5 CAPLUS
CN 1H-Benzimidazole, 2-[4-(3-fluoro-2-pyridinyl)-1-piperazinyl]methyl- (9CI) (CA INDEX NAME)



RN 474417-48-6 CAPLUS
CN 3-Pyridinol, 6-[4-(1H-benzimidazol-2-ylmethyl)-1-piperazinyl]- (9CI) (CA INDEX NAME)



RN 474417-51-1 CAPLUS
CN 1H-Benzimidazole, 2-[4-(3-methyl-2-pyridinyl)-1-piperazinyl]methyl- (9CI) (CA INDEX NAME)



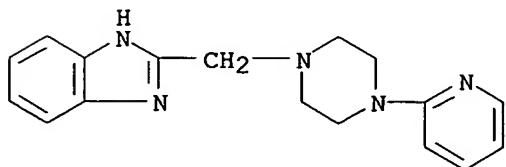
RN 474417-52-2 CAPLUS

10/699465

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]-, (2R,3R)-2,3-dihydroxybutanedioate (1:2) (9CI) (CA INDEX NAME)

CM 1

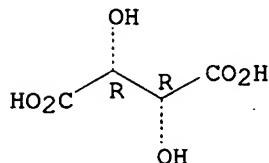
CRN 70006-24-5
CMF C17 H19 N5



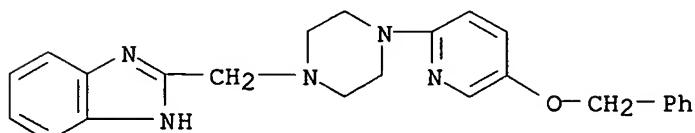
CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



IT 474417-50-0P, 2-[(4-[5-(Benzyl)pyridin-2-yl]piperazin-1-yl)methyl]-1H-benzimidazole
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of 2-piperazino/piperidino-alkyl-benzimidazole derivs. for treating sexual dysfunction)
RN 474417-50-0 CAPLUS
CN 1H-Benzimidazole, 2-[(4-[5-(phenylmethoxy)-2-pyridinyl]-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)

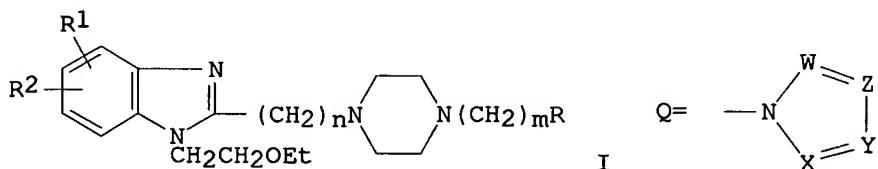


RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:235655 CAPLUS
DN 116:235655
TI Preparation of 2-[4-(azolobutyl)piperazino(methyl)]benzimidazoles and

analogs as antihistaminics
 IN Cuberes-Altisent, Maria Rosa; Frigola-Constansa, Jordi; Pares-Corominas, Juan
 PA Laboratorios del Dr. Esteve S. A., Spain
 SO Eur. Pat. Appl., 14 pp.
 CODEN: EPXXDW
 DT Patent
 LA French
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 468884	A1	19920129	EP 1991-402055	19910724
	EP 468884	B1	19951220		
	R: AT, BE, CH, DE, DK, FR, GB, GR, IT, LI, LU, NL, SE				
	FR 2665161	A1	19920131	FR 1990-9563	19900726
	FR 2665161	B1	19921127		
	NO 9102669	A	19920127	NO 1991-2669	19910708
	NO 178576	B	19960115		
	NO 178576	C	19960424		
	RO 109736	B1	19950530	RO 1991-148010	19910715
	KR 183028	B1	19990501	KR 1991-12584	19910723
	AU 9181280	A1	19920130	AU 1991-81280	19910724
	AU 638857	B2	19930708		
	AT 131822	E	19960115	AT 1991-402055	19910724
	CA 2047880	AA	19920127	CA 1991-2047880	19910725
	ZA 9105839	A	19920429	ZA 1991-5839	19910725
	US 5182280	A	19930126	US 1991-735653	19910725
	ES 2038074	A1	19930701	ES 1991-1740	19910725
	ES 2038074	B1	19940201		
	RU 2024519	C1	19941215	RU 1991-5001216	19910725
	PL 167222	B1	19950831	PL 1991-291247	19910725
	CN 1058404	A	19920205	CN 1991-105154	19910726
	CN 1030915	B	19960207		
	HU 58320	A2	19920228	HU 1991-2518	19910726
	HU 215109	B	20000428		
	JP 04234387	A2	19920824	JP 1991-187721	19910726
	JP 08032703	B4	19960329		
	CZ 280185	B6	19951115	CZ 1991-2351	19910726
	IN 176350	A	19960504	IN 1991-DE679	19910726
PRAI	FR 1990-9563	A	19900726		
OS	MARPAT 116:235655				
GI					



AB Title compds. [I; R = azolo group Q; R1, R2 = H, halo, alkyl, alkoxy, etc.; X, Y, Z, W = N, (substituted) CH; n = 0, 1; m = 2-4] were prep'd. Thus, I (R1 = R2 = H, n = 1) (II; R = H, m = 0) was condensed with

N-(4-bromobutyl)phthalimide and the product hydrazinolyzed to give II ($m = 4$) (III; $R = \text{NH}_2$) which was cyclocondensed with 2,5-dimethoxytetrahydrofuran to give III ($R = \text{pyrrolo}$). III ($R = 1,2,4\text{-triazol-1-yl}$) had ED₅₀ of 0.036 mg/kg i.p. against compd. 48/80-induced mortality in rats.

IT 140945-43-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as antihistaminic)

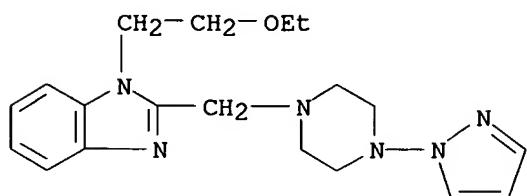
RN 140945-43-3 CAPLUS

CN 1H-Benzimidazole, 1-(2-ethoxyethyl)-2-[(4-(1H-pyrazol-1-yl)-1-piperazinyl)methyl]-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 140945-42-2

CMF C19 H26 N6 O

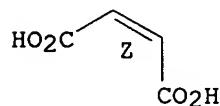


CM 2

CRN 110-16-7

CMF C4 H4 O4

Double bond geometry as shown.



L4 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1979:204028 CAPLUS

DN 90:204028

TI Synthesis and anthelmintic activity of 2-(N⁴-substituted-N¹-piperazinyl)methyl-5-(or 6)-substituted benzimidazoles

AU Sule, D. P.; Shah, M. H.; Ghooi, Shaila; Bhide, M. B.

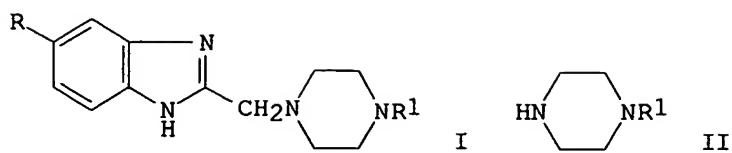
CS Dep. Chemother., Haffkine Inst., Bombay, India

SO Bulletin of Haffkine Institute (1978), 6(2), 62-4
CODEN: BHFIA9; ISSN: 0304-9515

DT Journal

LA English

GI



AB Sixteen piperazinylmethylbenzimidazoles I ($R = NO_2, H$; $R_1 = Me, CH_2CH_2OH, benzyl, Ph, p\text{-}ClC_6H_4, o\text{-}MeOC_6H_4, o\text{-}tolyl, 2\text{-}pyridyl, 2\text{-}thiazolyl$) were prepd. by reaction of the piperazine II with the resp. 2-chloromethylbenzimidazoles, which were prepd. from $3,4\text{-(H}_2\text{N)}_2\text{C}_6\text{H}_3\text{R}$ and $ClCH_2CO_2H$. The majority of I showed anthelmintic activity $>80\%$ at 500 mg/kg as compared to Yomesan showing 100% activity at 500 mg/kg. I ($R = NO_2$) were more active than I ($R = H$).

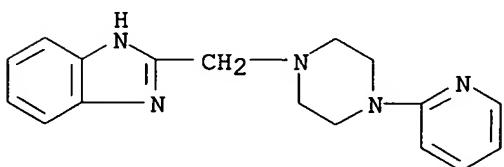
IT 70006-24-5P 70006-25-6P 70006-32-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

Study, PREP (Preparation) (prep. and anthelmintic activity of)

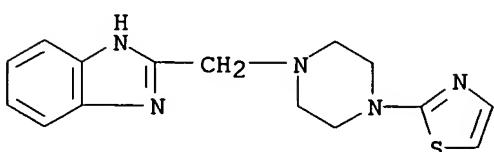
RN 70006-24-5 CAPLUS

CN 1H-Benzimidazole, 2-[(4-(2-pyridinyl)-1-piperazinyl)methyl]- (9CI) (CA INDEX NAME)



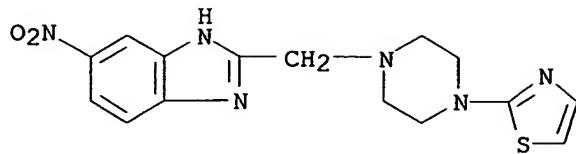
RN 70006-25-6 CAPLUS

CN 1H-Benzimidazole, 2-[[4-(2-thiazolyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



RN 70006-32-5 CAPLUS

CN 1H-Benzimidazole, 5-nitro-2-[(4-(2-thiazolyl)-1-piperazinyl)methyl]-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

=> file caold

COST IN U.S. DOLLARS

SINCE FILE
ENTRYTOTAL
SESSION

FULL ESTIMATED COST

72.46

257.15

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRYTOTAL
SESSION

CA SUBSCRIBER PRICE

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-10.50

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FILE LAST UPDATED: 01 May 1997 (19970501/UP)

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=> s 13

L5 0 L3

=> log h

COST IN U.S. DOLLARS

SINCE FILE
ENTRYTOTAL
SESSION

FULL ESTIMATED COST

0.44

257.59

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRYTOTAL
SESSION

CA SUBSCRIBER PRICE

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-10.50

SESSION WILL BE HELD FOR 60 MINUTES

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